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Preliminary 1981-86 State Health Plan For Iowa

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Prepared By The Iowa State Health Department And The Statewide Health Coordinating Council

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NORMAN L. PAWLEWSKI
COMMISSIONER OF PUBLIC HEALTH

May 5, 1980

ALL IOWA CITIZENS:

The Preliminary State Health Plan is the result of year long work analyzing and comparing health and health care plans and information for Iowa. As the federally designated State Health Planning and Development Agency for Iowa, the Iowa State Department of Health is responsible for establishing state level goals and objectives to meet the state's priority health problems and to improve the health care system in meeting these problems.

Working with the Statewide Health Coordinating Council, the Department has reviewed the local plans of the three Health Systems Agencies in Iowa and state level agencies. The information, analyses and conclusions these plans contain form the basis for the State Health Plan. The State Health Plan provides a format for discussion of all statewide issues and problems, and for reconciling any differences between other plans.

The Statewide Health Coordinating Council has released this Preliminary State Health Plan for public comment before it becomes final and work begins on implementation of the goals and objectives. Public hearings will be held in the state to receive your comments on the Preliminary Plan. There will be thirty days public notice prior to these meetings. Written comment may also be addressed to this office.

We encourage you to attend a public hearing and express your concern for Iowa's health care system.

Sincerely,

Norman L. Pawlewski

Norman L. Pawlewski
Commissioner of Public Health

TABLE OF CONTENTS

PAGE

INTRODUCTION ---------- 1

Statutory Authority for the Plan ---------- 2
Statewide Health Coordinating Council ---------- 3
State Health Planning and Development Agency ---------- 5
Purpose and Use of the Plan ---------- 6
Abbreviations and Acronyms ---------- 7

CHAPTER ONE -
PRIORITIES FOR HEALTH AND HEALTH CARE ---------- 8

State Priorities for Health Status in Iowa ---------- 9
State Priorities for Services in Iowa ---------- 10
National Priorities ---------- 11

CHAPTER TWO -
SUMMARY OF GOALS ---------- 14

1981 - 1986 Goals and Objectives ---------- 16
Deleted or Substantively Changed 1980 Goals and Objectives - 46

CHAPTER THREE -
PREVENTIVE SERVICES ---------- 54

INTRODUCTION TO AN ANALYSIS OF STATEWIDE POLICIES AFFECTING PREVENTION ---------- 55

STATE POLICIES ON THE OVERALL ORGANIZATION AND FUNCTION OF PREVENTION ---------- 62

Local Public Health Departments ---------- 62
Health Education ---------- 64
Goals and Objectives ---------- 69

FIFTEEN PRIORITY DETERMINANTS OF PREVENTABLE ILLNESS ------- 71

Smoking ---------- 71
Status ---------- 71
System ---------- 72
Federal Policies ---------- 73
State Policies ---------- 74
Goals and Objectives ---------- 76

Substance Abuse ---------- 77
Status ---------- 77
System ---------- 79
Federal Policies ---------- 79
State Policies ---------- 80
Goals and Objectives ---------- 82
Nutrition ---------- 84
Status ---------- 84
System ---------- 85
Federal Policies ---------- 85
State Policies ---------- 87
Goals and Objectives ---------- 89
Exercise ---------- 91
Status ---------- 91
System ---------- 93
Federal Policies ---------- 93
State Policies ---------- 94
Goals and Objectives ---------- 95
Stress Control ---------- 97
Status ---------- 97
System ---------- 98
Federal Policies ---------- 99
State Policies ---------- 100
Goals and Objectives ---------- 101
Hazardous Agents ---------- 103
Status ---------- 103
System ---------- 107
Federal Policies ---------- 107
State Policies ---------- 109
Goals and Objectives ---------- 113
Occupational Health and Safety ---------- 116
Status ---------- 116
System ---------- 121
Federal Policies ---------- 121
State Policies ---------- 123
Goals and Objectives ---------- 125

Accidents ---------- 127
Status ---------- 127
System ---------- 128
Federal Policies ---------- 128
State Policies ---------- 129
Goals and Objectives ---------- 131
Infectious Agents ---------- 133
Status ---------- 133
System ---------- 134
Federal Policies ---------- 134
State Policies ---------- 134
Goals and Objectives ---------- 138
Fluoridation of Water ---------- 140
Status ---------- 140
System ---------- 141
Federal Policies ---------- 141
State Policies ---------- 141
Goals and Objectives ---------- 144
Pregnancy and Infant Care ---------- 145
Status ---------- 145
System ---------- 148
Federal Policies ---------- 148
State Policies ---------- 150
Goals and Objectives ---------- 152
Family Planning ---------- 155
Status ---------- 155
System ---------- 155
Federal Policies ---------- 157
State Policies ---------- 158
Goals and Objectives ---------- 160
Sexually Transmitted Diseases ---------- 162
Status ---------- 162
System ---------- 163
Federal Policies ---------- 163
State Policies ---------- 164
Goals and Objectives ---------- 165

Immunization ---------- 167
Status ---------- 167
System ---------- 168
Federal Policies ---------- 168
State Policies ---------- 169
Goals and Objectives ---------- 171
Hypertension ---------- 173
Status ---------- 173
System ---------- 175
Federal Policies ---------- 175
State Policies ---------- 176
Goals and Objectives ---------- 179

CHAPTER FOUR -
PRIMARY CARE ---------- 180

ANALYSIS OF STATEWIDE POLICIES
AFFECTING PRIMARY CARE ---------- 181
Description of System ---------- 181
Policies Relating to Primary Care ---------- 184
Health Personnel Resources ---------- 184
Financing Mechanisms ---------- 184
Alternatives ---------- 185
Programs Aimed at Implementing
State Health Policies ---------- 185
Health Personnel Resources ---------- 185
Program Financing Mechanisms ---------- 192
Alternatives ---------- 193
Systems Goals and Objectives ---------- 196
IOWA'S PRIORITY HEALTH PROBLEMS AS
AFFECTED BY PRIMARY CARE SERVICES ---------- 196
Accidents ---------- 196
Cancer ---------- 197
Dental ---------- 198
Heart Disease ---------- 200
Communicable Diseases ---------- 200
Complications of Pregnancy ---------- 201
Mental Disorders ---------- 201
Substance Abuse ---------- 203
SOURCES OF INFORMATION ---------- 205

CHAPTER FIVE -

ACUTE CARE ---------- 208

DESCRIPTION OF ACUTE CARE DELIVERY IN IOWA ---------- 209

STATEWIDE POLICIES AFFECTING
ACUTE CARE DELIVERY ---------- 209

Facility Licensing ---------- 209

Capital Equipment and Construction ---------- 210

Utilization of Hospitals ---------- 210

Alternatives to Acute Care ---------- 210

Making the Acute Care System More Efficient ---------- 211

Making the System Less Costly ---------- 211

Making the System More
Responsive to Consumer Needs ---------- 211

PROGRAMS AIMED AT IMPLEMENTING
ACUTE CARE POLICIES ---------- 212

Facility Licensing and Certification ---------- 212

Capital Equipment and Construction ---------- 212

Utilization of Hospitals ---------- 215

Alternatives to Acute Care ---------- 228

Making the Acute Care System More Efficient -------- 234

Consideration of the National Guidelines
for Acute Care Bed Capacity ---------- 240

Adjustment of the Guidelines ---------- 241

Making the System Less Costly ---------- 247

Making the System More Responsive
to Consumer Needs ---------- 249

IOWA'S PRIORITY HEALTH PROBLEMS
AFFECTED BY ACUTE CARE SERVICES ---------- 250

Accidents ---------- 250

Cancer ---------- 251

Consideration of the National Guidelines
for Radiation Therapy ---------- 251

Heart Disease ---------- 253

Consideration of the National Guidelines
for Cardiovascular Surgery ---------- 253

Consideration of the National Guidelines
for Cardiac Catheterization ---------- 255

Mental Disorders ---------- 256

Substance Abuse ---------- 259

Complications of Pregnancy ---------- 259

Consideration of National Guidelines for Obstetrical Units ---------- 259

Consideration of National Guidelines for Neonatal Intensive Care Services -------- 262

Consideration of National Guidelines for Pediatric Acute Care ---------- 263

Communicable Diseases ---------- 265

NATIONAL GUIDELINES FOR SERVICES NOT PREVIOUSLY CONSIDERED ---------- 266

Consideration of National Guidelines for Computerized Tomographic (CT) Scanners ---- 266

Consideration of National Guidelines for End Stage Renal Disease ---------- 268

SOURCES OF INFORMATION ABOUT ACUTE CARE ---------- 273

CHAPTER SIX -

LONG TERM CARE ---------- 278

DEFINITION OF LONG TERM HEALTH CARE ---------- 279

DESCRIPTION OF LONG TERM HEALTH CARE SERVICES ---------- 283

Hospice Care ---------- 285

Home Centered Nursing and Other In-Home Health Care ---------- 286

Specialized Clinics ---------- 287

General Inpatient Nursing Care ---------- 288

Specialized Inpatient Nursing Care ---------- 288

General Residential Care ---------- 289

Specialized Residential Care ---------- 289

Inpatient Care for Mental Illness ---------- 289

Outpatient Care for Mental Illness ---------- 296

Pharmaceutical Services ---------- 290

Medical and Dental Care ---------- 291

Assessment and Coordination Services ---------- 291

TRENDS AFFECTING LONG TERM HEALTH CARE ---------- 291

CURRENT CHALLENGES FOR PUBLIC POLICY ---------- 293

STATEWIDE POLICIES ON LONG TERM HEALTH CARE ---------- 294

STATEWIDE PROGRAMS TO IMPLEMENT POLICIES ---------- 299

Public Payments ---------- 299

Quality Assurance and Accountability ---------- 300

Cost Containment and Control of Capital Expenditures ---------- 301

Direct Public Provision of Services ---------- 301

PROBLEM STATEMENTS IN HEALTH STATUS ---------- 303
Arthritis ---------- 303
Diabetes ---------- 304
Hypertension ---------- 305
Organic Brain Syndromes ---------- 306
Heart and Circulatory Disease ---------- 307
Cancer ---------- 307
Accidents ---------- 308
Mental Disorders Other Than Organic Brain Syndromes ---------- 308
Developmental Disabilities - Mental Retardation ---------- 310
Substance Abuse ---------- 311
Dental Health ---------- 312
Hearing, Speech and Visual Impairments ---------- 313
Assessment of Functional Abilities ---------- 313
GOAL STATEMENTS FOR HEALTH STATUS ---------- 320
Reduced Limitations in Functional Abilities -------- 320
Reduced Incidence of Diseases Associated with Lifestyle ---------- 321
PROBLEM STATEMENTS AND GOALS IN LONG TERM HEALTH CARE ---------- 322
Availability ---------- 322
Effect of Statewide Policies on Availability ------- 327
Goals and Objectives on Availability ---------- 330
Quality of Care ---------- 334
Effect of Statewide Policies on Quality ---------- 335
Goals and Objectives on Quality ---------- 337
Access to Care ---------- 338
Goals and Objectives on Access to Care ---------- 339
Continuity of Care ---------- 340
Effect of Statewide Policies on Continuity of Care - 341
Goals and Objectives on Continuity of Care --------- 342
Cost of Care ---------- 343
Effect of Statewide Policies on the Cost of Care --- 343

CHAPTER SEVEN -
MENTAL HEALTH/SUBSTANCE ABUSE ---------- 362

Mental Health ---------- 363
Advisory Council ---------- 365
Substance Abuse ---------- 366
Advisory Council ---------- 366
Mental Health/Substance Abuse
Statewide Needs and Priorities ---------- 366
Mental Health/Substance Abuse
Children and Youth ---------- 367
Elderly ---------- 372
Handicapped ---------- 374
Low Income Individuals ---------- 374
Rural Populations ---------- 375
Ethnic and Racial Minorities ---------- 376
Continuity of Services ---------- 376

CHAPTER EIGHT -
HEALTH CARE COSTS ---------- 381
Methods of Payment ---------- 385
Overutilization of Services ---------- 386
Excess Supply of Acute Care Hospital
Beds and Services ---------- 387

GLOSSARY ---------- 389

The following appendices to the 1981-1986 Preliminary State Health Plan for Iowa are published separately. They are available on request by writing the Office for Health Planning and Development, Iowa State Health Department, Lucas State Office Building, Des Moines, Iowa, 50319.

Appendix I - Descriptive Data on Iowa's Population

Appendix II - Descriptive Data on Iowa's Health Care System and the Health Status of Iowa's Citizens

Appendix III - Comparison of Iowa's Health Systems Plans and Local Goals

Appendix IV - State Certificate of Need Standards

Appendix V - Evaluation of the Iowa State Health Plan 1978-1979

Appendix VI - State Plan for Comprehensive Public Health Services FY 1980 (314 d Funding Plan)

Introduction

- Statutory Authority -

The 1980 Iowa State Health Plan was prepared by the Office for Health Planning and Development, Iowa State Department of Health, which submitted it to the Statewide Health Coordinating Council for its review and approval. This plan is developed following the mandate established by Congress in the National Health Planning and Resource Development Act of 1974 for statewide health planning.

The specific functions which the Statewide Health Coordinating Council is to carry out are described in Section 1524 of the National Health Planning and Resources Development Act (P.L. 93-641) and as amended P.L. 96-79. They include the following:

(1) Annual review and coordination of the Health Systems Plan and the Annual Implementation Plan of each Health Systems Agency of a health service area located in whole or in part within the State.

(2) Review, revision, and approval or disapproval of the preliminary State Health Plan which has been prepared by the State Health Planning and Development Agency.

(3) Conduct of a public hearing on the preliminary State Health Plan giving interested persons an opportunity to submit their views orally and in writing.

(4) Provision of a copy of the state Health Plan to the Governor who may approve or disapprove the State Health Plan depending on his determination on how effectively it meets the statewide health needs as determined by the State Agency of the State.

(5) Provision of a copy of the current State Health Plan to the Secretary of Health, Education and Welfare.

(6) Annual review of the budget of each Health Systems Agency located in whole or in part within the State and reporting to the Secretary of Health, Education and Welfare its comments on each budget.

(7) Review of applications submitted by the Health Systems Agencies located in whole or in part within the State for grants under Sections 1516 and 1640 of Public Law 93-641 and reporting to the Secretary of Health, Education and Welfare its comments on such applications.

(8) Advising the State Health Planning and Development Agency on the performance of its functions.

(9) Annual review and approval or disapproval of any State plan and any application (and any revision of a State plan or application) submitted to the Secretary of Health, Education and Welfare as a condition to the receipt of Federal funds made available under allotments, in accordance with Section 1524 (c) (6) of Public Law 93-641 and applicable regulations of the Secretary.

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The National Health Planning Act directs the governors of each state to designate health service areas within the state, and a State Health Planning and Development Agency (SHPDA). The local needs of the health service areas are to be analyzed by Health Systems Agencies (HSAs), while the State Planning Agency - the SHPDA - is to review and revise the plans of the HSAs in preparing the State Health Plan with the Statewide Health Coordinating Council.

As stated in the Act, the SHPDA is to:

"1. Conduct the health planning activities of the State and implement those parts of the State Health Plan...and the plans of the health systems agencies within the state which relate to the government of the state.

2. Prepare and review and revise as necessary (but at least annually) a preliminary State Health Plan which shall be made up of the HSPs of the health systems agencies within the state. Such preliminary plan may, as found necessary by the state agency, contain such revisions of such HSPs to achieve their appropriate coordination or to deal more effectively with Statewide Health Coordinating Council of the State for approval or disapproval and for use in developing the State Health Plan.

3. Assist the Statewide Health Coordinating Council in the review of the State Medical Facilities Plan...and in the performance of its functions generally.

4. (A) Serve as the designated planning agency of the state for the purpose of section 1122 of the Social Security Act..., and
(B) administer a State Certificate of Need Program...

5. (Review the need for new institutional services), and,

6. (Review the appropriateness of existing services, areawide).",

7. Determine Statewide Health needs in consultation with the SHCC, designated agencies and HSAs.

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- Purpose and Use of The Plan -

The State Health Plan is based on the health systems plans and categorical plans in the state. It presents measurable goals and objecitves which detail improvements in Iowa's health and health care system. Incremental improvements were chosen based on analysis of system-wide and state-wide problems. The analysis is comprehensive, but does not try to build a "model" of the service system nor present "ideal" solutions. Goals, objectives and actions were selected when the direction of desired improvement or change was clear and it was possible to monitor and measure change.

The planning issues, health and health care goals, objectives and actions in the State Plan are to be the basis for all the implementation activities of the Health Department, including the Certificate of Need Program. Since Certificate of Need rules and regulations must be consistent with the State Plan, the Certificate of Need decisions of the Health Facilities Council must be consistent with the plan.

The Statewide Health Coordinating Council, a board appointed by Governor, uses the State Plan in reviewing:

1. The grant applications and plans of the Health Systems Agencies;

2. The State Plans and grant applications for funds available under the Public Health Service Act, Community Mental Health Centers Act or Comprehensive Alcohol Abuse and Alcohol Prevention, Treatment and Rehabilitation Act of 1970; and,

The focus of actions in the State Plan is on state level programs and policies. Most recommended actions concern the existing or possible influence of state agenices and programs on correcting Iowa's priority health problems and improving the service system. Both public and private organizations with statewide authority or influence are named in actions as responsible agents for accomplishing objectives. Thus, the State Health Plan advocates those changes which will have the broadest impact on the quality, cost and availability of services and on the state of individuals' health in Iowa.

ABBREVIATIONS AND ACRONYMS

A	AEA	- Area Education Agency
	AIP	- Annual Implementation Plan
	AMA	- American Medical Association
C	CCU	- Coronary Care Unit
	CDC	- Center for Disease Control (formally the Communicable Disease Center)
	CMHC	- Community Mental Health Center
	CON	- Certificate of Need
D	DMHR	- Department of Mental Health Resources
	DPI	- Department of Public Instruction
	DSS	- Department of Social Services
F	FY	- Fiscal Year
H	HMO	- Health Maintenance Organization
	HSP	- Health Systems Plan
I	ICF	- Imtermediate care facility
	ICF/MR	- Intermediate care facility for the mentally retarded
	ICU	- Intensive Care Unit
	IMHA	- Iowa Mental Health Authority
J	JCAH	- Joint Commission on Accreditation of Hospitals
L	LRRA	- Long range recommended action
M	MHI	- Mental Health Institute
P	PA	- Physician's Assistant
	PHS	- U.S. Public Health Service
	PSRO	- Professional Standards Review Organization
S	SHCC	- Statewide Health Coordinating Council
	SHP	- State Health Plan
	SHPDA	- State Health Planning and Development Agency
	SMFP	- State Medical Facilities Plan
	SNF	- Skilled Nursing Facility
	SRRA	- Short range recommended action
T	TITLE XVIII	- Medicare
	TITLE XIX	- Medicaid

Chapter One

Priorities For Health And Health Care

- State Priorities For Health Status in Iowa -

Setting priorities for health has been a responsibility of the Statewide Health Coordinating Council. These priorities are to be the highest level of policy guidance given to the State Health Planning and Development Agency and health systems agencies. In 1978 the Iowa SHCC instructed the Office for Health Planning and Development to establish a method for prioritizing health problems which would take into account state data for morbidity and mortality and problems identified by other plans. Diseases and disease categories were to be ranked according to the illness and death they caused and when in a person's life they were likely to occur. Conditions which caused a great deal of morbidity at younger ages (before 45) were to receive a higher ranking.

Following these principles the state agency drew up a list of 21 conditions, compiling all available mortality and morbidity data. Days of hospital care was used as an indicator for morbidity. The state rates per 1000 population were then compared to national rates for three age groups. Weighted scores were then assigned according to whether the state was above or below the national average in the age groups. Additional weight was assigned for recognition in the HSPs, legislation, other state categorical plans, national priorities, executive task forces, etc. A scale and cutoff point was established which ensured that no problem could become a top priority with only "subjective" scores, i.e.,recognition in another plan. Some combination of morbidity/mortality score and "recognition" score was necessary.

This method was chosen because it provides a relative rank of severity of incidence, based on the built-in policy decisions on comparison with national rates. This comparison also gives some indication that the problem can be improved or prevented through health care. Thus, the priorities are a guide to the allocation of resources.

The complete list and ranking of conditions, with the final priorities underlined, is:

Accidents - Injuries and deaths	26
Mental Disorders	22
Malignant Neoplasms (Cancer)	19
* Cerebrovascular Disease (Stroke)	19
Substance Abuse	18
Diseases of Genitourinary System	17
Infective and Pausitic Diseases (Communicable Diseases)	13
* Heart Disease - Circulatory Diseases	11
Hearing Impairments	11
Diabetes	10
Complications of Pregnancy and Childbirth	10
Respiratory Diseases	7
Diseases of the Nervous System and Sense Organs	8
Congenital Anomalies	7
Diseases of the Skin	7
Arthritis	6
Peptic Ulcer	5
Benign and Unspecified Neoplasms	5
Suicide	5
Cirrhosis	5
Hernia	6

(* combined)

Many of the lower ranked problems are addressed in the analysis of the systems priorities, or will receive attention because of the goals and objectives chosen.

An amendment (P.L. 96-79) to the Health Planning Act was enacted by Congress in 1979. This amendment requires the State Health Authority and the State Mental Authority, as well as other State Agencies designated by the Governor, to recommend statewide health needs and priorities to the State Health Planning and Development Agency. The SHPDA then becomes responsible for developing statewide health needs and priorities with consultation with the SHCC and HSAs. All such Agencies are required to have Advisory Councils that are geographically and socio-economically representative of Iowa, as well as having a consumer majority representation. If the SHPDA does not accept these recommendations for statewide needs and priorities they must explicitly state in writing the reasons for not doing so. As a preliminary effort the advisory councils for the mental health authority and the Department of Substance Abuse submitted recommendations of needs and priorities in January, 1980. The SHCC then adopted a revision of their recommendations during the February 6, 1980 SHCC Quarterly meeting. The following is the adopted 1980 Statewide Needs and Priorities for Health Status in Iowa:

1. Accidents
2. Strokes/heart disease
3. Complications of pregnancy and childbirth
4. Communicable diseases
5. Cancer
6. Mental disorders
   a services to underserved populations (children and youth, elderly, ethnic and racial minorities, handicapped, low income individuals and rural)
   b. community based mental health services offering inpatient, emergency, outpatient, pre-screening, follow-up, and consultation/education (including promotion of mental health)
   c. incorporation of local professional, consumer, and government official input to ensure protection of patient rights in state and local mental health planning, funding, and service delivery
   d. integration of all mental health services and integration of those services with other health and human agency services
   e. mental health services for the chronically mentally ill ensuring least restrictive environment and planning and funding for ensuring high quality of services in all living environments for the chronically mentally ill.
7. Substance Abuse
   a. quality of existing treatment rehabilitation services statewide
   b. expansion of quality prevention/early intervention services including public information
   c. increased programming techniques in all phases of service to address special population group needs (children and youth, elderly, women, ethnic and racial minorities, handicapped, low income individuals and rural)
   d. enhancement of the Plan Development system as developed by Iowa Department of Substance Abuse

- State Priorities For Services in Iowa -

The SHCC also desired to establish system priorities to complement the status analysis. It was considered that certain services and aspects of health care per se should be emphasized in the analysis of the health problems. Here, the cost of care, total expenditures for services and potential contribution to overall health status were the prime considertaions in recommending changes.

Four priority services were chosen: acute care, long term care, primary care, and prevention, detection and health education services. Together, the four categories describe the full range of health care services, each being a vital component with broad contribution to the overall health status of Iowans. Different issues developed as the focus of each chapter on services. Preventive services were seen as an area where traditional public health services have had a strong impact, and where new and expanded services could contribute a great deal to improved status and cost containment. Cost containment and resource analysis were major issues with acute care. Quality assurance and access was the primary concern in long term care. Access and availability were seen as the central issues in primary care this year.

- National Priorities -

The State priorities are directly related to those set by the National Health Planning Act, which were considered and referred to during all discussions. As stated in 1974, these priorities are:

1. The provision of primary care services for medically underserved populations, especially those which are located in rural or economically depressed areas.

2. The development of multi-institutional systems for coordination or consolidation of institutional health services (including obstetric, pediatric, emergency medical, intensive and coronary care, and radiation therapy services).

3. The development of medical group practices (especially those whose services are appropriately coordinated or integrated with institutional health services), health maintenance organizations, and other organized systems for the provision of health care.

4. The training and increased utilization of physician assistants, especially nurse clinicians.

5. The development of multi-institutional arrangements for the sharing of support services necessary to all health service institutions.

6. The promotion of activities to achieve needed improvements in the quality of health services, including needs identified by the review activities of Professional Standards Review Organizations under part B of Title XI of the Social Security Act.

7. The development of health service institutions of the capacity to provide various levels of care (including intensive care, acute general care, and extended care) on a geographically integrated basis.

8. The promotion of activities for the prevention of disease, including studies of nutritional and environmental factors affecting health and the provision of preventive health care services.

9. The adoption of uniform cost accounting, simplified reimbursement, and utilization reporting systems and improved management procedures for health service institutions.

10. The development of effective methods of educating the general public concerning proper personal (including preventive) health care and methods for effective use of available health services.

11. The promotion of an effective energy conservation and fuel efficiency program for health service institutions to reduce the rate of growth of demand for energy.

12. The identification and discontinuance of duplicative or unneeded services and facilities.

13. The adoption of policies which will (A) contain the rapidly rising costs of health care delivery, (B) ensure more appropriate use of health care services, and (C) promote greater efficiency in the health care delivery system.

14. The elimination of inappropriate placement in institutions of persons with mental health problems and the improvement of the quality of care provided those with mental health problems for whom institutional care is appropriate.

15. Assurance of access to community mental health centers and other mental health care providers for needed mental health services to emphasize the provisionof outpatient as a preferable alternative to inpatient mental health services.

16. The promotion of those health services which are provided in a manner cognizant of the emotional and psychological components of the prevention and treatment of illness and maintenance of health.

17. The strengthening of competitive forces in the health services industry wherever competition and consumer choice can constructively serve, in accordance with subsection (b), to advance the purposes of quality assurance, cost effectiveness, and access.

(b) (1) The Congress finds that the effect of competition on decisions of providers respecting the supply of health services and facilities is diminished. The primary source of the lessening of such effects is prevailing methods of paying for health services by public and private health insurers, particularly for inpatient health services and to her institutional health services. As a result, there is duplication and excess supply of certain health services and facilities, particularly in the case of inpatient health services.

(2) For health services, such as inpatient health services and other institutional health services, for which competition does not or will not appropriately allocate supply consistent with health systems plans and State health plans, health systems agencies and State health planning and development agencies should in the exercise of their functions under this title take actions (where appropriate to advance the purposes of quality assurance, cost effectiveness, and access) to allocate the supply of such services.

(3) For the health services for which competition appropriately allocates supply consistent with health systems plans and State

health plans, health systems agencies and State health planning and development agencies should in the performance of their functions under this title give priority (where appropriate to advance the purposes of quality assurance, cost effectiveness, and access) to actions which would strengthen the effect of competition on the supply of such services.

The national priorities were considered in setting goals and writing objectives. They were addressed by each of the Health Systems Agencies in preparing their plans, and thus in those incorporated in the state plan. State analysis of other plans also took the national priorities into consideration.

The national resource standards were also addressed by each HSA. Their work and supplemental state analysis is included in the acute care chapter - Chapter Five - and in Appendix IV - Certificate of Need Standards.

Chapter Two

Summary of Goals

Introduction to Summary Chapter

In 1979, State Health Planning and Development Agency contracted with an evaluation consultant to access the degree of attainment of goals, objectives and action steps integrated into the State Health Plan. Such information is necessary if a plan is to become a realistic guide for allocation of resources. You will note several goals, objectives, and action steps from the 1978 plan were deleted or changed as a result of the evaluation feedback. Another such evaluation of planning for September and will affect the next health plan. The following summary chapter is divided into two parts: (1) summary of current goals, objectives and recommended action steps deleted or changed from the last SHP (1980). Part one lists all of the goals, objectives and recommended action steps which are in effect for the 1981-86 planning cycle. The action steps were selected from a range of possible strategies and the selections were made on the basis of cost and reasonable expectation of accomplishment. (For alternative strategies considered, see State Implementation Plan.)

Part two of this section lists those goals, objectives, and recommended action steps which have deleted or substantively changed from last year's plan. The rationale for deletion or change precedes each goal, objective, and recommended action step.

- Preventive Services -

STATUS GOAL 1: DECREASED RATES OF PREVENTABLE MORTALITY ASSOCIATED THROUGH LIFE-STYLE, ENVIRONMENTAL AND PREVENTIVE HEALTH SERVICE CHANGES.

STATUS GOAL 2: DECREASED RATES OF PREVENTABLE MORTALITY AND MORBIDITY ESPECIALLY ASSOCIATED HIGH SOCIAL DIRECT AND INDIRECT COSTS.

Health Education

School Health Education

SERVICE GOAL 1: INCREASED AVAILABILITY OF HEALTH EDUCATION PROGRAMS IN THE SCHOOL, COMMUNITY, AND HEALTH CARE SERVICES SETTINGS, THAT:

- IMPROVE COMPREHENSION OF HEALTH INFORMATION INCLUDING HEALTH ECONOMICS:
- EMPHASIZE INDIVIDUAL RESPONSIBILITY FOR SOCIAL AND PERSONAL CHANGE IN ORDER TO LIVE HEALTHFULL.

Objective 1: By 1985, the development and utilization of Comprehensive School Health Education curricula for grades K-12 in at least 50% of the 400-500 local public school districts.

LRRA 1: The implementation of recommendations of the Task Force on Comprehensive School Health Education:

- seek Title IV-C funding to implement six model school health education programs in Iowa
- provide schools with needs assessment models
- seek additional funding for comprehensive health education at the local, area, and state levels
- serve as health education clearinghouse for resource material to the schools and school personnel and the AEAs

LRRA 1a: The State Advisory Committee on Teacher Education and Certification consider adoption of a health education component in approved elementary teacher education programs.

SRRA 1: The Department of Public Instruction implement recommendations in the Comprehensive School Health Education Final Report to health education consultants.

SRRA 1a: Three minor changes in the Iowa Code, Chapter 257.25 as recommended in the Comprehensive School Health Education Final Report.

Objective 4: By 1985, establishment of at least 5 ongoing continuing education programs in health education practice for health care professionals and teachers.

LRRA 3: Each AEA provide a professionally trained health education coordinator and/or designated consultant for school health education as recommended in the Comprehensive School Health Education Final Report.

Community Health Education

Objective 4: By 1983, through a statewide committee and/or state staff, coordination of all statewide governmental and voluntary public health promotion activities.

LRRA 4: By 1981, the State Department of Health will fund a community health educator position to help staff the State Department of Health community health education responsibilities.

LRRA 4a: The Iowa Prevention Network or a similar state group will contact governmental and voluntary agencies conducting community health education to:

- inventory present community health education efforts
- encourage agencies' participation in the network
- define gaps and overlaps in statewide health promotion efforts

LRRA 4b: The State Department of Health during 1979-80 will spearhead state planning efforts and apply for a "Health Education-Risk Reduction Project Grant" on behalf of community health education.

Local Public Health Departments

SERVICE GOAL 2: INCREASED REGIONALIZATION OF LOCAL PUBLIC HEALTH SERVICES TO MAXIMIZE ECONOMICS OF SCALE, QUALITY, AND ACCESSIBILITY TO LOCAL PUBLIC HEALTH SERVICE IN IOWA.

Objective 1: By 1985, more district health departments in Iowa.

LRRA 1: By 1982, the State Health Department, Community Health Division, and the Office for Health Planning, with local health departments revise the plan, District Health Departments...Why and How.

Objective 2: By 1983, creation of at least one program at the baccalaureate and masters level in health education (apart from a physical education/health education program) to provide personnel to carry out the function of school and community health education.

LRRA 2: Office for Health Planning and Deveolpment work with Health Systems Agencies and State agencies to recognize objective 2 as a priority for next planning cycle.

STATUS GOAL 3: DECREASED CIGARETTE SMOKING AMONG IOWA'S POPULATION.

SERVICE GOAL 3: INCREASED REGULATORY, ECONOMIC, PREVENTIVE SERVICE AND EDUCATIONAL PROGRAMS/STRATEGIES IN ORDER TO DECREASE SMOKING.

Objective 1: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report. See actions on page 69.

Objective 2: By 1985, change in Federal/State income tax laws such that cigarette advertising is no longer a tax deductible expense.

Objective 3: By 1985, state program to coordinate inventory of current smoking prevention programs in the state.

Objective 4: By 1985, increase to an average of at least one smoking cessation workshop in each high school in Iowa annually.

Objective 5: By 1985, increase present sales tax on high tar/nicotene cigarettes from 6-7.5 mills to _____.

Objective 6: By 1985, local law enforcement agencies more severely enforcing Chapter 98 and 98A, Code of Iowa, 1979.

STATUS GOALS 4: DECREASED MIND-ALTERING SUBSTANCE ABUSE AMONG IOWANS, PARTICULARLY ALCOHOL ABUSE, AND PARTICULARLY AMONG THOSE POPULATIONS - YOUTH, LOW INCOME AND UNEMPLOYED - AT RISK.

SERVICE GOALS 4: INCREASED AVAILABIILITY OF SUBSTANCE ABUSE PREVENTION (EDUCATIONAL, ECONOMIC, REGULATION AND PROGRAMMATIC) STRATEGIES IN ORDER TO DECREASE SUBSTANCE ABUSE AMONG AT RISK POPULATIONS.

Objective 1: By 1985, increased availability of services for drug abuse prevention through an increased sales tax on liquor sold in Iowa liquor stores from 3% to 5%, and a special dollar barrel tax on beer.

LRRA 1: State legislature enact SF 156 which increases sales tax for the purchase of alcoholic beverages and barrel beer as specified in Objective 1.

Objective 2: By 1985, elimination of ability to allow deferred sentences for OMVUI.

LRRA 1: State legislature to enact HF 49 which eliminates deferred sentences for OMVUI. Section 321.281 states that OVMUI's first offense requires a two day prison sentence. But this requirement may be deferred by Chapter 907. SF 2061 would allow deferred sentences, but add fines to the required prison sentences for OMVUI.

Objective 3: By 1985, a better system of counting the number of drivers who, while under the influence of alcohol, are involved in accidents of personal injury.

LRRA 1: Iowa Department of Substance Abuse and Health, and the Highway Safety Program study and seek necessary Code changes to attain better count of such alcohol related injuries.

Objective 4: By 1985, state and federal income tax deductions for alcohol advertising be disallowed.

LRRA 1: Iowa Departments of Substance Abuse and Health will contact state and federal revenue officials to discover necessary steps to carry out objective.

Objective 5: By 1985, special health and life insurance rates required for group policies whose memebers practice substantially healthy habits.

LRRA 1: Iowa State Department of Health will contact Insurance Commission officials to determine extent such rates are now available in Iowa.

Objective 6: By 1985, at least 25%, or 110, of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report to the Department of Public Instruction.

LRRA 1: Enactment of the seven recommendations of the Task Force Report.

STATUS GOAL 5: INCREASED NUMBER OF IOWANS WHO ARE OF THE IDEAL WEIGHT AND WHO ACHIEVE IDEAL BLOOD CHOLESTEROL LEVELS.

SERVICE GOAL 5: THROUGH EDUCATION, FOOD SUPPLEMENTS AND TECHNOLOGICAL MEASURES, LOWER THE NUMBER OF IOWANS WHO ARE OVERNOURISHED, AND DECREASE THE NUMBER OF IOWANS WHO ARE UNDERNOURISHED.

Objective 1: By 1985, food labeling legislation for the nation and for Iowa that requires the amount of salt, sugar, fat and saturated fat and calories on all packaged and processed food.

LRRA 1: ISDH support federal and state legislation to require such labeling on such processed food.

Objective 2: By 1985, assessment of proposal charges in state policies toward food production and processing in order to and consumers in choosing diets with less salts, saturated fats and sugars.

LRRA 1: Establishement of a nutrition inter-agency coordinating council to oversee and improve effectiveness of state level activities related to nutrition and develop an assessment of state nutrition policies.

Objective 3: By 1985, same as other comprehensive health education objectives.

See page 69 for actions.

Objective 4: By 1985, all government funded meal programs in Iowa using the nutrition guidelines in "Nutrition and Your Health".

SRRA 1: Disseminate guidelines to all programs in Iowa.

LRRA 1: Each state agency sponsor with funded meal programs providing consultation to those programs to explain how to use guideline.

STATUS GOAL 6: INCREASE THE PERCENTAGE OF AT RISK POPULATIONS, THE ELDERLY, WOMEN, AND LOW INCOME WHO REGULARLY EXERCISE.

SERVICE GOAL 6: THE COORDINATION AND GREATER AVAILABILITY OF STATEWIDE PHYSICAL ACTIVITY PROGRAMS AND IMPLEMENTATION OF OTHER STRATEGIES, (EDUCATIONAL AND ECONOMIC) IN ORDER TO INCREASE THE PERCENTAGE OF IOWA'S POPULATION WHO REGULARLY EXERCISE. (NOW ESTIMATED TO BE LESS THAN 50%)

Objective 1: By 1985, a staffed program available in state government to coordinate and provide consultation to local health/exercise programs.

SRRA 1: During FY 1981, SDOH implement health program for its employees.

Objective 2: By 1985, at least two health or life insurance companies offering employers and employees with effective health programs discounted premiums reflective of those groups' increased health.

Objective 3: By 1985, four more major companies having health/education exercise programs.

LRRA 1: SDOH or Governor's Council on Physical Fitness will inventory in Iowa health programs in workplace.

LRRA 2: Passage by legislative of governor sponsored appropriations for funding staff position for the Council on Physical Fitness.

STATUS GOAL 7: INCREASED ABILITY AMONG IOWANS, PARTICULARLY THE UNEMPLOYED, YOUNG, AND OLD TO COPE WITH HIGH STRESS SOCIAL SITUATIONS AND DECREASED INCIDENCE OF HIGH STRESS SOCIO-ECONOMIC SITUATIONS.

SERVICE GOAL 7: THE AVAILABILITY OF PROGRAMS THAT ENABLE IOWANS TO LEARN COPING SKILLS AND THE IMPLEMENTATION OF TECHNOLOGICAL AND ECONOMIC STRATEGIES IN ORDER TO DECREASE IOWANS STRESS DUE TO ACCELERATED SOCIAL-CHANGE.

Objective 1: By 1985, 5 major employers in Iowa implementing stress management programs as part of a work based health program.

LRRA 1: See action steps under objective 3 on page 95.

Objective 2: By 1985, for one occupation of high stress in Iowa, creation of an employer, worker and government volunteer committee identify or implement strategies to make work more reqarding and less stress producing.

LRRA 1: SDOH staff will contact worker organization and employers to determine interest in particular profession.

Objective 3: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report.

See actions on page 69.

Objective 4: Maintain a level of four community education workshops per month at each MHI.

SRRA 1: Staff at MHI's continue current outreach for community education.

Objective 5: By 1985, fifteen Community Mental Health Centers providing federally definded comprehensive services, including preventive education services.

LRRA 1: The three HSAs and the State Health Department will work with the Iowa Mental Health Authority and the Regional planning Groups to bring about more comprehensive services.

LRRA 2a: Statewide substance abuse/mental health planning bodies work with AEAsto determine the types of mental health prevention programs needed by school children and adolescents.

STATUS GOALS 8: DECREASE EXPOSURE TO TOXICANTS IN THE DRINKING WATER, FOOD, AIR WHICH IOWANS BREATH FROM HAZARDOUS AGENTS PRODUCED, USED, AND DISPOSED OF IN IOWA.

SERVICE GOALS 8: REGULATORY ECONOMIC, AND TECHNOLOGICAL STRATEGIES SUFFICIENT TO EFFECTIVELY REMOVE THE HEALTH THREAT FROM THE ENVIRONMENTAL TOXICANTS.

WATER QUALITY/HAZARDOUS WASTES

Objective 1: By 1985, a Hazardous Waste Control program fully implemented.

LRRA 1: DEQ will take steps to educate the general public about proper hazardous waste management techniques.

LRRA 2: DEQ will gather information on the types, quantities, and hazards of wastes produced in Iowa.

LRRA 3: DEQ will obtain delegation to administer RCRA hazardous waste program in Iowa.

LRRA 4: Obtain legislation to close loopholes in HF 719, and develop rules for an effective hazardous waste management program.

Objective 5: By 1985, a state program pursuant to the Toxic Substance Control Act implemented.

LRRA 1: DEQ will take steps to obatin delegation to administer TSCA in Iowa.

LRRA 2: DEQ will obtain legislation and development for an effective hazardous.

AIR QUALITY

Objective 3: By 1985, all air quality control programs regions at least the primary national ambient air quality standard.

LRRA 1: DEQ will continue to work with local governments and industries to assure compliance by 1985.

RADIATION

Objective 4: By 1985, 50% of all radiation emitting equipment in compliance with state rules.

LRRA 1: By 1981, SDOH will register all radiation emitting equipment located in the state.

LRRA 2: By 1983, SDOH will register all, except practitioners, the operators of all diagnostic x-ray machines used in the practice of medicine osteoathy, dentistry, chiropractic and podiatry.

LRRA 3: The SDOH will continue to provide expertise for emergency and radiation accident response and participate in emergency planning and exercise activities.

STATUS GOAL 9: DECREASED INCIDENCE OF JOB RELATED ILLNESS ESPECIALLY CANCER AND OTHER CHRONIC DEGENERATIVE DISEASES AND OF JOB RELATED INJURIES.

SERVICE GOAL 9: THROUGH REGULATORY, ECONOMIC, EDUCATIONAL AND SURVEILLANCE, AND TECHNOLOGICAL STRATEGIES MORE SAFE AND HEALTH WORKPLACE ENVIRONMENT.

Objective 1: By 1985, state and federal OSHA develop a system for effective monitoring and regulation of toxic substances before they enter into workplace environment.

LRRA 1: By 1982, DEQ and State OSHA responsibilities defined with regard to Toxic Substance Control Act.

Action Step:

Objective 2: By 1990, employees informed of potential health hazards through publication of a statement or significant correlation between occupation exposure, premature mortality and disability in Iowa.

LRRA 1: State and Federal OSHA staff will work with researcher at state university and with state and local Health Department of Health to gather information.

Objective 3: By 1985, the characteristics: of the work environment; of monitoring and screening practices; of the adequacy of professionals trained in occupational safety and health determined in Iowa.

LRRA 1: By 1981, state and federal OSHA progams, working with local and state health officials and educational institutions determine data now available.

LRRA 2: By 1981, OSHA determine resources necessary to complete such a inventory of industry, educational institutions and occupational to health services.

Objective 4: By 1985, strengthened occupational health nurse training.

LRRA 1: By 1982, SDOH will inventory nurse training programs in Iowa to determine classes and training offered in occupational health.

LRRA 2: By 1983, recommendation developed by SDOH on specific classes and training experiences required.

Objective 5: By 1985, OSHA, labor unions, employers and employees in high-risk workplaces develop and implement an employee education and risk reduction program.

LRRA 1: During 1981, the ISDH will inventory state for existing employee health programs.

Objective 6: By 1985, federal and state tax incentives to encourage implementation of technology which reduces risks to workers in high risk occupations.

LRRA 1: By 1983, state and fedeal proposals to allow tax exemption and deduct for safety equipment.

Objective 3: By 1982, recommendations developed and implemented to prevent fire, falls and drowning in the state.

SERVICE GOAL 11: INCREASED AVAILABILITY OF RENTAL HOUSING WHICH IS NOT DETRIMENTAL TO THE HEALTH OF IOWANS.

Objective 1: By 1984, a revised Chapter 413, the State Housing Code, and regulations passed and approved by the State Legislature.

LRRA 1: The State Department of Health, Health Engineering Section, with other State agencies and local health departments' help will submit suggested revisions of the State Housing Code to the State Legislature by 1981.

SRRA 1: The State Department of Health will contact local health departments to gain suggestions and support for code revisions by 1980.

LRRA 2: The State Department of Health will develop with the Building Code Commission, in conjunction with revising the housing code, a proposal to better integrate housing and building code enforcement.

Objective 2: By 1985, all local health departments in SMSAs enforcing the revised State Housing Code.

LRRA 2: The State Department of Health will set up a task force of local citizens and public health officials to study the problems of substandard rental housing in Iowa, and the enforcement of the housing code by local departments of health.

STATUS GOAL 10: REDUCE ACCIDENTAL FATALITIES AND INJURIES TO IOWANS.

SERVICE GOAL 10: REDUCE THE NUMBER OF FATAL MOTOR VEHICLE CRASHES EACH YEAR BY FOUR PERCENT; REDUCE THE INJURIES DUE TO MOTOR VEHICLE CRASHES BY FOUR PERCENT,THROUGH 1983. (STATE HIGHWAY SAFETY PLAN)

Objective 1: By 1985, reenactment of the state motorcycle helmet law.

(See additional objectives under substance abuse.)

Objective 2: By 1985, all mothers leaving hospitals with newborns aware of the advantages and given follow-up education to encourage use of infant car restraints.

STATUS GOAL 12: REDUCTION OR ERADICATION OF INCIDENCES AND EPIDEMICS OF ALL NON-IMMUNIZABLE INFECTIOUS DISEASES AND ZOONOTIC DISEASES.

SERVICE GOAL 12: CONTROL OF INFECTIOUS NON-IMMUNIZABLE AND ZOONOTIC DISEASES THROUGH EPIDEMIOLOGIC SURVEILLANCE.

Objective 1: By 1985, prevent cases of zoonotic diseases in humans through continuance of surveillance programs at state and local health departments.

Objective 2: By 1985, an improved disease reporting system for certain non-immunizable infectious and zoonotic diseases through local and state public health officials.

SERVICE GOAL 13: BACTERIALLY AND CHEMICALLY SAFE SURFACE AND GROUND WATERS, AND DRINKING WATER AVAILABLE TO ALL RESIDENTIAL SITES.

Objective 1: By 1985, 95 percent of the estimated 240,365 households which have private water supplies:

- informed of the dangers and signs of chemically and bacterially unsafe water, and

- aware of the appropriate sources to analyze and solve complaints and conditions relative to water quality and safety.

SRRA 1: By July 1, 1981, have proposed legislation that clarifies that the Department has responsibility for establishing minimum construction standards for on-site waste treatment systems and small water supplies.

SRRA 2: By January 1, 1980, have resubmitted proposed legislation for state-wide certification of water well contractors.

SRRA 3: By 1982, a media campaign directed at well and septic tank users.

Objective 2: By July 1, 1981, have established a consultation program relative to hazardous or toxic chemicals as they relate to the environment and public health.

SRRA 1: Consumer Product Safety transferred from the State Department of Agriculture to Health Engineering.

SRRA 2: By July 1, 1981, have permanent budget and new legislation allowing routine, surveillance and monitoring of public swimming pools.

SRRA 3: By 1982, have completely revised the State Plumbing Code to develop a single code for the state. The State Building Code Office has a separate code used for approving federal monies used in construction.

STATUS GOAL 14: ALL IOWANS WITH GOOD ORAL HEALTH

SERVICE GOAL 14: ECONOMIC AND EDUCATIONAL BARRIERS TO FLUORIDATION OF COMMUNITY WATER SUPPLIES AND TOPICAL SCHOOL BASED APPLICATION ELIMINATED.

Objective 1: By 1985, Dental health education and dental health services increased by 25% to children and low income, pregnant women.

Objective 2: By 1982, Community water-fluoridation available to 93% of Iowans served by public water supplies.

SRRA 1: SDOH will identify funding sources.

Objective 3: By 1982, Fluoride rinse programs for all children using private water supplies.

LRRA 1: Iowa State Department of Health will develop a plan which includes agreements with the State Department of Public Instruction to provide for curriculum, staff requirements and costs.

SRRA 1: Iowa State Department of Health will evaluate participation and effectiveness of current programs.

SRRA 2: Iowa State Department of Health will identify priority areas based on need.

STATUS GOAL 15: A DECREASE IN THE NUMBER OF RISK FACTORS WHICH RESULT IN MORBIDITY AND MORTALITY IN PREGNANT WOMEN AND INFANTS.

SERVICE GOAL 15: THROUGH EDUCATIONAL, LEGISLATIVE, ECONOMIC AND SERVICE STRATEGIES INCREASE AVAILABILITY AND UTILIZATION OF STATEWIDE COMPREHENSIVE HEALTH SERVICES FOR WOMEN AND CHILDREN.

Objective 1: By 1985, antepartum and postpartum health care given to women in maternal health centers will be increased from 2% (2,465) to 10% (7,371) of the low income women in the State.

SRRA 1: State Department of Health will identify and seek funding sources needed to expand maternal health center services.

Objective 2: By 1985, supplemental foods and nutrition education will be increased from 30% to 65% of the low income children 0-5, pregnant women, and postpartum women who are nutritionally at-risk.

SRRA 1: State Department of Health will gain legislative approval for additional administrative staff.

Objective 3: By 1985, indepth counseling and follow-up will be provided to an additional 300 Iowa families involved with a birth defect or genetic disease by 1984.

SRRA 1: Regional Genetic Consultation service will continue to operate at current levels.

LRRA 1: Registry of epidemiology program added for genetic/birth defects to current program.

Objective 4: By 1985, dental health education and dental health services will be increased by 25% to children and low income, pregnant women in the State by 1984.

See Fluoridation for actions

Objective 5: By 1985, Medicaid program expanded to cover women from the first trimester of pregnancy, so that no more than 3000 women enter care later than first trimester.

LRRA 1: State agencies concerned with maternal and child health will seek support of State legislative changes in Medicaid program.

SRRA 1: ISDOH will develop public information campaign to be jointly sponsored with other statewide agencies.

Objective 6: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education as defined in the 1979 Comprehensive School Health Education Final Report.

See page 69 for actions.

Objective 7: Yet to be added on services for teens.

Objective 8: By 1985, 25% of EDSDT eligible children screened annually (6% are now screened) by public health nurses or at child health screening centers.

LRRA 1: State Department of Health and Department of Social Services will expand center sites from 34 to _____.

Objective 9: By 1985, expansion of child health centers from 33 counties to Statewide.

LRRA 1: State Department of Health will contact with local public officials to identify resources available and need to expand.

Objective 10: By 1985, preventive education for parents on accident prevention, nutrition, health care services available at hospitals for all new parents, with public health nursing home follow-up for at-risk mothers and infants.

LRRA 1: State Department of Health will contact the Iowa Hospital Association, and at least five hospitals in the State to provide information on and encourage accident prevention education.

STATUS GOAL 16: ALL CHILDREN BORN WANTED.

SERVICE GOAL 16: FAMILY PLANNING SERVICE SHALL BE AVAILABLE TO ALL IOWA RESIDENTS IN NEED OF THESE NECESSARY HEALTH CARE SERVICES REGARDLESS OF AGE, SEX, RELIGION, RACE, MARITAL OR SOCIAL STATUS, WITH SPECIAL EMPHASIS DIRECT TOWARD LOW INCOME POPULATIONS.

Objective 1: By 1985, family planning services to low income women including teenagers, at risk of having unwanted pregnancies increase by 25% from 47,000 to 58,000

LRRA 1: SDOH will identify additional resources need to reach Iowans in need.

Objective 2: By 1985, increased school community education on ways to prevent, and to choose not to have unwanted pregnancies.

LRRA 1: Inventory current community and school family planning education efforts.

Objective 3: Referral services linkages stronger between State Department of Health Maternal and Child Health projects and Family Planning services.

LRRA 1: State Department of Health staff establish procedures which define how and when cross referrals are appropriate.

Objective 4: All local family planning agency's assume greater outreach into rural areas.

STATUS GOAL 17: THE PRESENT RATES OF SEXUALLY TRANSMISSABLE DISEASES LESSENED IN ORDER TO KEEP DAMAGE TO HEALTH, INCLUDING BLINDNESS, STERILITY, SYSTEMIC AND LOCAL INFECTIONS AT A MINIMUM.

Objective 1: By 1982, no more than 6,000 cases of gonorrhea per year (1978 = 7,260 cases; 1976 = 6,500 cases)

SERVICE GOAL 17: EDUCATION ON AND PREVENTIVE HEALTH SERVICES FOR SEXUALLY TRANSMISSIBLE DISEASES IN ORDER TO MAINTAIN OR LESSEN THE PRESENT RATES OF SEXUALLY TRANSMISSIBLE DISEASES.

Objective 1: By 1988, 95% of exposed gonorrhea cases given preventive treatment each year.

SRRA 1: State Department of Health will continue surveillance activities of contacts.

Objective 2: By 1985, update Iowa Code to reflect recent changes in use of term "sexually transmissible disease" instead of venereal disease.

LRRA 1: State Department of Health will draft need changes in Chapter 139 and submit to the Board of Health.

Objective 3: By 1985, stronger referral links and follow-up between family planning clinics doing STD screening and STD clinics.

LRRA 1: State Department of Health will develop standards for family planning agencies regarding follow-up on positive cases.

Objective 4: By 1985, STD information and education as part of comprehensive school health education in at least 25% of local school districts.

(See action steps on page ___).

Objective 5: By 1985, all medical students going into primary care specialties having at least 20 hours of diagnosis and treatment experience in sexually transmissable diseases.

SRRA 1: State Department of Health will inventory U of I and COMS to determine STD clinical experience primary care primary care specialties.

Objective 6: By 1985, adult education classes for parents on family life, sex education and sexually transmissible disease prevention within the boundaries of each area education agency and family planning service area.

LRRA 1: State Department of Health will inventory AEAs and family planning agencies to determine number of persons served classes available in family life adult education classes.

STATUS GOAL 18: NEAR ERADICATION OF THE SEVEN COMMUNICABLE DISEASES RECOMMENDED FOR IMMUNIZATION IN PERSONS LESS THAN 18 IN ORDER TO LESSEN COSTLY AND PREVENTABLE MORBIDITY.

Objective 1: By 1982, limit the annual incidence rate of these seven immunizable communicable diseases to no more than the following:

Measles and Rubella - .33 cases/10,000 population
Polio - 0 cases/10,000 population
Diptheria and Tetanus - no more than .01 cases/10,000 population (one case each per year)
Mumps - no more than 1.67 cases.10,000 population (500 cases per year)
Pertussis - no more than .04 cases/10,000 population (10 cases per year)

STATUS GOAL 18: REDUCED INCIDENCE OF MORTALITY FROM INFLUENZA AND INFLUENZA RELATED PNEUMONIA AMONG THE ELDERLY, INFANTS AND CHRONICALLY ILL SUCH THAT OPTIMAL HEALTH AND LONGEVITY IS MAINTAINED AMONG THESE POPULATIONS.

Objective 1: By 1982, no more than three deaths/10,000 population from influenza. (90 deaths)

In 1974 the rate was 3.8/10,000 persons and 108 deaths occurred.

Objective 2: By 1982, reduced incidence of reported cases of influenza from 175 cases/10,000 persons to 140 cases/10,000 persons (42,054 cases in the population).

SERVICE GOAL 19: IMMUNIZATION LEVELS IN THE POPULATION AGAINST DIPHTHERIA, RUBELLA, RUBEOLA, POLIO, TETANUS, MUMPS AND PERTUSSIS (WHOOPING COUGH) IN ORDER TO PREVENT THE SICKNESSES DISABILITIES RESULTING FROM INDIVIDUALS CONTACTING THESE DISEASES.

Objective 1: By 1982, 90 percent of the population immunized against the seven recommended immunizable communicable diseases.

LRRA 1: Continue to enforce Iowas immunization law.

Objective 2: By 1985, teenagers and women in Iowa have adequate immunity to rubella.

LRRA 1: The SDOH will through enforcement of the immunization law to seek that schools keep records of immunization of all high school women and offer referring for immunization.

SERVICE GOAL 20: AN INCREASED NUMBER OF CHRONICALLY ILL AND OTHER HIGH RISK RESIDENTS IMMUNIZED AGAINST INFLUENZA AND INFLUENZA-LIKE DISEASES AND PNEUMONIA IN ORDER TO PREVENT UNNECESSARY MORBIDITY AMONG THESE POPULATIONS.

Objective 1: By 1982, 70 percent of chronically ill or high risk individuals (approximately 400,000 residents) immunized each year against the more prevalent virulent drift of influenza virus with the vaccine recommended for use during that year.

LRRA 1: SDOH will develop a plan for statewide eradication of immunizable communicable diseases in cooperation with physicians in Iowa (see 314(d) grant application).

Objective 2: By 1982, a program for penumonia vaccinations in Iowa.

STATUS GOAL 21: REDUCED PREVALENCE OF HYPERTENSION AND OTHER CHRONIC CIRCULATORY DISORDERS AMONG IOWANS, ESPECIALLY AMONG AT-RISK POPULATIONS--BLACKS AND RURAL RESIDENTS.

Objective 1: By 1985, sodium consumption reduced by 10% among the Iowa population.

Objective 2: By 1985, obesity reduced by 10% among the Iowa population.

SYSTEMS GOAL 21: INCREASE THE NUMBER OF "AT-RISK" RESIDENTS USING EDUCATIONAL, EARLY DETECTION AND FOLLOW-UP SERVICES FOR HYPERTENSION AND OTHER CHRONIC CIRCULATORY DISEASES,

Objective 1: By 1981, at least 60,000 Iowans screened annually through screening programs funded by the State Department of Health.

LRRA 1: See State Project Grant Proposal for Iowa Hypertension Services Programs.

Objective 2: By 1982, 35% of all blacks 21 years of age and over, or approximately 6,000 persons, screened for hypertension annually through screening programs funded by the State Department of Health.

LRRA 1: The Renal Disease and Hypertension Section will provide blood pressure education and training to specialty nursing/ community groups in 5 or 10 Iowa counties which have a black population of over 400 persons.

- PRIMARY CARE -

- System Goals and Objectives -

GOAL 1: COST EFFECTIVE HEALTH CARE THROUGH AVAILABILITY OF AND ACCESSIBILITY TO COMPREHENSIVE PRIMARY CARE SERVICES FOR ALL IOWA RESIDENTS.

Objective 1: Increased employment of physician's assistants graduating from the University of Iowa's Physician's Program to accomodate approximately 75% of each year's graduating class in Iowa.

LRRA 1: Iowa Health Systems Agencies work with communities and the DHEW Regional Office in designated shortage areas to establish health centers supported by RHI, HVRA, or similar funds.

LRRA 1a: The Department provide Iowa data necessary for the Health Systems Agencies for the designation of shortage areas.

LRRA 1b: The Department shall work to identify shortage areas (as defined in Federal Register, Vol. 43, No. 6, 1978) in Iowa in cooperation with area Health Systems Agencies and make recommendation for designation to DHEW.

LRRA 1c: The Physician's Assistants Program of the University of Iowa will coordinate efforts to assist and encourage physicians to employ and utilize physician's assistants.

Objective 2: If by 1985, independently Licensed physician extenders are legally practicing, they will be directly reimbursed by third-party payors in Iowa.

LRRA 2: By 1983, the Department will assist the Iowa Board of Nursing in the implementation of rules relating to the practice of nurse specialties which will encourage third-party payment for those nursing specialties.

GOAL 2: ALTERNATIVE DELIVERY SYSTEMS BE AVAILABLE IN IOWA.

Objective 1: By 1985, at least three HMOs be serving consumers in Iowa, if they are found to be financially feasible.

LRRA 1: By 1983, the Department will monitor the feasibility study for an HMO in Des Moines and, if feasible, will assist in developing plans for the HMO-IPA.

LRRA 1a: The Department will monitor the feasibility study for an HMO in Pottawattamie County.

Objective 2: If by 1985, independently licensed physician extenders are legally practicing, they will be directly reimbursed by third-party payors in Iowa.

LRRA 2: By 1983, the Department will assist the Iowa Board of Nursing in the implementation of rules relating to the practice of nurse specialties which will encourage third-party payment for those nursing specialties.

GOAL 3: IMPROVED ORAL HEALTH AMONG ALL RESIDENTS OF IOWA.

(Objectives and action steps will be included after May 5 meeting with a committee of the Dental Association.)

- ACUTE CARE -

GOAL 1: MINIMIZE THE ADDITION OF DUPLICATIVE AND UNDER-UTILIZED ACUTE CARE CAPACITY AND EQUIPMENT.

Objective 1: By 1985, future system-wide need levels will be projected for hospital capacity and equipment.

In order to implement this objective several action steps were considered in an effort to overcome barriers which were identified as: inadequate base-line data on service-specific needs, and unverified inventories of the current acute care system.

LRRA 1: By 1983, the Department of Health will project population needs for specific acute care services as a part of the Department's responsibilities to conduct an appropriateness review of the health care system.

By 1985, the Department will draft Certificate-of-Need Standards for specific acute care bed units and services that will be consistent with the outcomes recommended by the research undertaken during the appropriateness reviews.

Objective 2: By 1983, imprecise terms used in facility regulations, such as "usable beds" will be defined in greater detail.

The specific barriers to the achievement of this objective are the ambiguities built into the statutory definitions and the understanding of those definitions by the provider and planner communities. In order to overcome those barriers a rule-making process will begin. During that process an open exchange between providers and planners will determine a concensus definition of terms.

LRRA 2: By 1983, the Department will develop and seek promulgation of expanded definitions that more precisely describe the components being regulated under the Certificate-of-Need law.

Objective 3: By 1985, all hospital administrators will have an acknowledged understanding of their facility's approved bed capacity, services and capital equipment.

This objective aims at determining an unambigious inventory of the acute care system so that changes could be channeled through the Certificate-of-Need process. It also aims at informing hospital administrators of the permanent levels against which future changes will necessitate a Certificate. By so doing it is intended to reduce the occurrance of inadvertent violation of the Certificate-of-Need law.

LRRA 3: By 1985, the Department will complete an on-site inventory of all hospitals, and will notify each hospital administrator of their facility's approved bed capacity, services and capital equipment.

Objective 4: By 1983, all projects that require a Certificate-of-Need be undertaken only with such a certificate.

It is assumed that hospital bed capacity changes and capital equipment purchases (in excess of $150,000), and changes in services offered that occur without having been reviewed by the Certificate-of-Need process are either inadvertent or intentional. If inadvertent, then the problem may be minimized by more thoroughly informing affected parties as to their precise responsibilities. If intentional, then the problem may be minimized by increasing the risks and penalties for violation.

Currently, the sanctions for failure to comply are either injunctive relief or denial of licensure. The first sanction is a time consuming process which could permit the service or construction to be completed before the legal issues are ever decided. Once the project is a fait accompli the cost-saving advantages may no longer be significant. The sanction of delicensure or denial of licensure is a severe penalty, allowing no intermediate-level penalty. In order to overcome these barriers, the following actions are provided.

SRRA 4: By 1982, the Department will publish a guide for hospital administrators, informing them of their specific obligations under the Certificate-of-Need law.

LRRA 4: By 1983, the Department will draft legislation establishing a range of sanctions for hospitals that fail to obtain a Certificate-of-Need prior to changing bed capacity, facility square footage, services offered, or purchasing capital equipment above the $150,000 limit specified in the law.

GOAL 2: REDUCE INAPPROPRIATE HOSPITALIZATIONS OF IOWA CITIZENS.

Objective 1: By 1986, a state average inpatient utilization rate of no more than 1248 patient-days per 1000 persons per year.

In order to implement this objective, five action steps are recommended. Two of the actions involve baseline research into the causes for rate variations, one involves evaluating state laws and programs to identify those which are inconsistent with achievement of this objective.

LRRA 1: By 1983, the Department will complete an analysis of the reasons for use-rate variation among Iowa's counties, in order to establish appropriate variances in the expected county use rates.

LRRA 1a: By 1985, the Department will complete a utilization study to determine potential optimim utilization levels for different age groups in Iowa.

LRRA 1b: By 1985, the Department will analyze state legislation and programs which can provide an incentive for encouraging outpatient treatment as an alternative to inpatient care wherever possible. The Department will also seek to identify programs and laws which provide an incentive for inpatient usage, so that those programs and laws may be changed.

LRRA 1c: By 1983, the Department will study the feasibility of drafting legislation to establish utilization and quality review, by appropriate P.S.R.O. groups, for consumers covered by third-party payers.

SRRA 1a: By 1982, the Department will begin monitoring the aggregate in-patient utilization rates in Iowa. These annual reports will be made available to the P.S.R.O., the SHCC and interested persons.

GOAL 3: ELIMINATION OF UNNECESSARY INPATIENT BED CAPACITY.

Objective 1: By 1985, the State will be in compliance with the Adjusted National Guideline goal of an average of 4.4 inpatient beds for every 1000 persons.

SRRA 1: By 1981, the Health Facilities Council will begin applying the Acute Care Bed Needs Standard, adopted by the SHCC, to all applicants seeking a Certificate-of-Need to remodel, reconstruct or renovate hospital inpatient bed capacity or to increase the facility's capacity while unnecessary beds exist.

LRRA 1: By 1985, the Department will work with the Iowa Hospital Association and the University of Iowa Health Center to develop a plan for consolidation and regionalization of Iowa's hospitals.

GOAL 4: THE PORTION OF AN IOWA CONSUMER'S DOLLAR SPENT FOR ACUTE CARE SERVICES WILL REMAIN CONSTANT.

Objective 1: By 1986, the annual rate of hospital charge increases in Iowa be no more than the annual change in the National Hospital Input Price Index. (This objective will be measured as the rate of change in adjusted expenses per patient admission compared to the rate of change in the NHIPI)

SRRA 1: By 1981, the Department will evaluate the compliance of the Iowa Voluntary Cost Containment Council's efforts to achieve this objective.

LRRA 1: By 1983, the Department will investigate the feasibility of prospective rate setting for all medical costs, in the event that this objective has not been met through peer control.

LRRA 1a: By 1986, the Department will analyze the potential for hospital rate review, in the event that other measures do not achieve this objective.

GOAL 5: CONSUMERS SHOULD BE INVOLVED IN THE DECISION-MAKING REGARDING THEIR OWN MEDICAL CARE.

Objective 1: By 1985, consumers will be better educated and prepared to make informed decisions regarding their own treatment.

LRRA 1: By 1983, the Department will work with interested health consumer groups to draft legislation identifying the rights and responsibilities of consumers and providers of health care.

Objective 2: By 1985, all non-profit hospital and medical service corporations (under IAC Chapter 514) authorized to provide hospital, medical, pharmaceutical or optometric service contracts in Iowa will have a majority of consumers on their boards of directors.

LRRA 2: By 1983, the Department will draft legislation changing Ch. 514.4, Code of Iowa (1979) to require majority membership by consumers on the boards of non-profit hospital and medical service corporations.

GOAL 6: ACCIDENT VICTIMS SHOULD BE TREATED IN THE MOST EFFECTIVE/LEAST COSTLY MEANS POSSIBLE.

Objective 1: By 1985, the rate of in-patient acute care for accident victims in Iowa be no more than the U.S. rate for that condition.

LRRA 1: By 1983, the Department will have analyzed the type of treatment provided to accident victims in acute care facilities to determine what less-costly alternative modes could provide the same quality of care.

LRRA 1a: By 1983, the Department will work with other agencies to identify those conditions that result in in-patient acute care for accidents and will draft a plan for reducing the probability and severity of those accidents. (See Preventive Services Chapter).

GOAL 7: ACUTE CARE SERVICES FOR SUBSTANCE ABUSE VICTIMS BE AVAILABLE IN THE MOST EFFICIENT AND EFFECTIVE MANNER POSSIBLE.

Objective 1: By 1981, the Department of Substance Abuse will have available, hospital-based data on substance abuse incidents.

SRRA 1: By 1981, the Department of Health will supply to the Department of Substance Abuse hospital-based discharge data obtained from studies of Iowa hospital consumers undertaken by the Department and the Iowa Hospital Association.

GOAL 10: CADAVERIC ORGANS BE AVAILABLE IN SUFFICIENT SUPPLY TO PROVIDE FOR THE TRANSPLANTATION NEEDS OF CURRENT AND POTENTIAL IOWA RECIPIENTS.

Objective 1: By 1985, the number of cadaveric organ donors will increase sufficiently to decrease the waiting lists of potential Iowa recipients.

SRRA 1: By 1981, the Department of Health will assist the Iowa Kidney Foundation and other interested organizations to publicize the need for more organ donors.

A. Status Goal 1: The Reduced Incidence of Limitations in Functional Abilities or Activities Due to Chronic and Long Term Disabling Conditions.

Objective 1: The severity of chronic complications and limitations in activity from diabetes will be reduced in nursing home residents.

LRRA 1: The Iowa Foundation for Medical Care will solicit information on the management of complications of diabetes and will conduct a quality assurance study of present techniques in Iowa nursing homes by 1982.

Objective 2: The severity of chronic complications and limitations in activity from heart and circulatory disease will be reduced.

LRRA 2: The Iowa Heart Association, Iowa Medical Society, the State Department of Health and appropriate professional nursing associations will collaborate in collecting information to be distributed to the public and providers, on the management of chronic complications from heart and circulatory disease by 1982.

Objective 3: The incidence of chronic complications from heart and circulatory disease will be reduced.

Objective 4: The incidence of chronic dental problems among nursing home residents will be reduced.

LRRA 4: The Iowa Departments of Health and Social Services, Iowa nursing home associations, the University of Iowa School of Dentistry, and the Iowa Dental Society, will collaborate on a plan to increase Medicaid coverage and payments for regular prophylactic dental care by June, 1981.

Objective 5: The severity of chronic complications and limitations in activity from arthritis and rheumatism will be reduced so that no more than 158 persons per 10,000 population will have major activity limitation as a result of arthritis and rheumatism. (1974 national rate was 176 per 10,000 persons.)

LRRA 5: The Iowa Department of Health, Iowa nursing home associations, Iowa Arthritis Foundation, the Iowa Medical Society, and appropriate professional nursing associations will cooperate in collecting information to be distributed to the public and providers on the management of chronic complications from arthritis.

B. Status Goal 2: The Reduced Incidence of Diseases Associated with Lifestyle Which Have Chronic Complications

Objective 1: The incidence of heart and circulatory disease will be reduced.

Objective 2: The reduced prevalence of undetected and untreated hypertension without heart involvement.

- Goals And Objectives Concerning The Appropriate Range And Quantity Of Long Term Health Care Services Which Should Be Available -

GOAL 1: THE MOST EFFICIENT AND EFFECTIVE MIX AND DISTRIBUTION OF LONG-TERM HEALTH CARE SERVICES (MANPOWER AND FACILITIES) IN IOWA.

Objective 1: By 1986 the actual distribution of all nursing care beds by county will be based on standards established by the Department of Health.

SRRA 1: Standards for the number of nursing care beds needed in each county or aggregates of counties will be set by the Department's Certificate-of-Need Program using a revised population based bed need formula.

LRRA 1: The Department will pursue the conversion and closure of excess beds through implemenation of a program of technical assistance, incentives, and sanctions.

Objective 2: All financial and administrative barriers to reimbursement of home health services be removed from public reimbursement by 1983.

SRRA 2: The Department and the Iowa Department of Social Services conduct a survey of home health agencies to identify financial and administrative barriers to full reimbursement of all home health services.

LRRA 2: Based on the findings of the above survey and analysis by the Department, Medicaid and Medicare rules and regulations be changed to allow for and facilitate full reimbursement of all home health services by 1983.

Objective 3: All financial and administrative barriers to reimbursement of "skilled" or heavy care nursing will be removed from public reimbursement programs by 1983.

SRRA 3: Any reasons for the small number of skilled nursing care beds in Iowa related to licensure or Certificate-of-Need will be investigated by the Department and a report written.

SRRA 3a: Any reasons for the small number of skilled nursing beds related to reimbursement policies will be investigated by the Department of Social Services and the Medicare fiscal intermediaries and a report submitted to the Department.

LRRA 3: By 1982, the Iowa Department of Social Services will have investigated alternative schemes for Medicaid reimbursement of nursing home care including:

(1) prospective payments;

(2) payments for services delivered;

(3) performance or outcome differentials; and

(4) adequate reimbursement and more extensive coverage of rehabilitation and maintenance services.

Objective 4: Actual distribution and numbers of Public Health Nurses by county will be based on research conducted by the Department (Office of Health Planning and Community Services) by 1986.

LRRA 4: Standards for the minimum number of Public Health and Home Health Nurses will be set by county using the Western Interstate Commission on Health Education or similar manpower model, to be applied by the Department of Health by June 1982.

LRRA 4a: The Department of Health will prepare a cost-effectiveness report on the effect of implementing the minimum standard, and recommend state funding to the legislature by 1983 based on, and as a part of this report.

Objective 5: The Iowa Legislative will continue and expand the special state appropriations for home health care.

SRRA 5: The Department will submit a yearly evaluation and budget request to the legislature.

Objective 6: All County Care Facilities will have programming which meets the physical, emotional and psycho-social needs of the residents and supports their maximum independent functioning by 1986.

SRRA 6: The Mental Health Institutes will expand their program of consultation to the County Care Facilities.

LRRA 6: The Iowa Department of Social Services and the Department of Health will collaborate with county governments to assess the programming available and set standards for needed services by 1984.

Objective 7: Aftercare, follow-up care and case management will be available for all persons in the community with chronic or long term mental health ploblems.

LRRA 7: All four Mental Health Institutes will participate in community support programs by 1985.

Objective 8: There will be thirty programs offering adult day care services in Iowa by 1986, with at least ten of these certified for Medicare and Medicaid reimbursement.

SRRA 8: The Department of Social Services and Blue Cross/Blue Shield will prepare an information package explaining potential Medicare and Medicaid reimbursement.

LRRA 8: By 1982, the Department of Health and Area Agencies on Aging the information and be encouraging formation of day care centers.

Objective 9: Respite care for developmentally disabled persons living with their families will be available in each county by 1986.

SRRA 9: The Departments of Social Services and Health will collaborate with the State Core Advisory Committee, Office of Developmental Disabilities and Health Systems Agencies in identifying existing and potential types of respite care and providers.

Objective 10: Diagnosis and evaluation service will be available within three months of a request to the State Schools, to be delivered at sites in each Department of Social Services district.

SRRA 10: The Department of Social Services will assess the cost of providing this outreach service and request funding from the legislature.

Objective 11: The supply of professionals providing rehabilitative and therapeutic services will be increased to meet identified need by 1986.

SRRA 11: The Department of Health will review the results of a task force initiated by the Iowa Health Systems Agency which will assess the adequacy and specific short falls of the current supply, and recommend state support of training, and placement programs as appropriate.

Objective 12: The Department of Health will establish licensure of Home Health Agencies by 1984.

SRRA 12: The Department will convene a task force of home care providers to make recommendations to the Department concerning licensure provisions.

LRRA 12: The Department of Health will develop proposals for additions to the Iowa Code and Administrative Code for licensure provisions by 1982.

LRRA 12 a: The Department will assess the cost of administering licensure of nursing homes and submit a budget request to the legislature by 1983 for the 83-85 biennium.

LRRA 12b: The Department will begin administering licensure by 1984.

Objective 13: Comprehensive assessment and coordination services will be available in each county by 1986.

SRRA 13: The Department will support and monitor expanded demonstration projects of the Iowa Model Gerontology Project providing comprehensive assessment and referral services; and continue to assess the Scott County project.

Objective 14: There will be ten programs offering complete hospice care or incorporating hospice concepts on voluntary, non-profit basis in Iowa by 1986.

LRRA 14: The Department of Health will develop Certificate of Need standards for the organization, minimum services, and staffing of hospice care by 1982.

LRRA 14a: By 1983 the Department of Social Services will include hospice care in the Medicaid Plan for reimbursement of administrative and home services involved in hospice care not elsewhere covered.

LRRA 14b: Some private insurers in Iowa will reimburse hospice care by 1984.

Objective 15: The use of mental health services by the elderly, women, minorities and handicapped will be increased to a point proportional to area populations by 1986.

SRRA 15: The Department will contact all community Mental Health Centers to obtain their plans for meeting this objective.

SRRA 15a: The Department will work with the Mental Health Authority to set regional target levels.

Objective 16: Pharmacists will be integrated into all long term health care services by 1986.

SRRA 16: The Department will investigate Pharmacist consultant programs in other states.

LRRA 16: Pharmacist consultants will be required for licensure and certification of skilled and intermediate care facilities by 1983.

LRRA 16a: Pharmacist consultants will be required for licensure and certification of home health agencies by 1984.

GOAL 2: All Iowa citizens will have available long term health care which allows them maximum independence (is least restrictive) and which maintains as much community contact as possible.

Objective 1: All Certificate of Need decisions on long term care will be made taking this goal into consideration.

SRRA 1: Planning staff will provide information on and analysis of the appropriateness of current and projected placements in long term care

GOAL 2: All Iowa citizens will have available long term health care which allows them maximum independence (is least restrictive) and which maintains as much community contact as possible.

Objective 1: All Certificate of Need decisions on long term care will be made taking this goal into consideration.

SRRA 1: Planning staff will provide information on and analysis of the appropriateness of current and projected placements in long term care.

Objective 2: The Department of Health will encourage conversion of Intermediate Care Facility beds to skilled and residential levels.

Objective 3: The Department of Health will encourage the development of sheltered living and other personal care settings.

Objective 4: Coverage of adult day care services will be added to Medicaid by 1982.

SRRA 4: The Department will present data on the benefits of adult day care to the Department of Social Services and the legislature.

- State Goals and Objectives Concerning Quality of Care -

GOAL 2: QUALITY OF LONG TERM HEALTH CARE WILL BE ASSURED FOR ALL IOWANS IN TERMS OF THE OUTCOME OF CARE.

Objective 1: All Iowa Nursing Homes will be reporting standardized data on the outcome of care on a regular basis as a requirement of the licensure process by 1985.

SRRA 1: The Department of Health will develop and test an instrument for measuring outcome of care by 1981.

LRRA 1: The Department of Health will develop and implement a management information system for collecting and reviewing data on the outcome of care by 1985.

Objective 2: All providers of long term health care will be collecting some standardized data on assessment of need by 1986, and reporting summaries of this information to the Health Department.

SRRA 2: The Department of Health will convene and support a task force to develop a minimum set of functional status, health status, and demographic data for long term health care.

LRRA 2: The Minimum Long Term Care Data Set Task Force will report to the Health Department by June of 1981.

Objective 3: The Department of Health will expand its range of administrative actions for quality assurance by requesting authority to require a change of ownership where a serious problem with quality of care has been shown.

- State Goals and Objectives Concerning Access for Long Term Health Care -

GOAL 3: CONSUMERS AND PROVIDERS WILL HAVE ADEQUATE INFORMATION ON LONG TERM HEALTH CARE SERVICES.

Objective 1: A statewide consumer guide to long term health care services will be available to consumers, providers and any interested public agencies by 1982.

SRRA 1: A survey will be conducted by the Department of Health in cooperation with the Iowa State Commission on Aging to determine the information considered most useful by consumers and providers in selecting types of care and specific providers by March, 1981.

SRRA 1a: The Department of health will convene a consulting group of educators, providers, and public officials to provide advice on the guide.

SRRA 1b: The Department of Health will establish funding for a consumer guide to long term health care.

SRRA 1c: The Department of Health will coordinate the survey of providers and services and production of the guide.

LRRA 1: The Department of Health will publish the guide by March, 1982.

LRRA 1a: Distribution of the guide will be accomplished through the Iowa Commission on Aging, the Iowa Hospital Association, Iowa Association of Homes for the Aging, Iowa Mental Health Authority, Iowa Pharmacists Association, Iowa Department of Social Services, Iowa Health Care Association, and by the Department of Health by May, 1982.

Objective 2: A counseling manual for providers which focuses on the emotional and social support of the person seeking long term health care will be available to all providers and interested public and private agencies by 1983.

LRRA 2: The Department of Health will convene a consulting group of educators, providers and public officials to provide advice on the manual by June, 1981.

LRRA 2a: The Department of Health will establish funding for the counseling manual by January, 1982.

LRRA 2b: The Department of Health will publish the manual by June, 1982.

LRRA 2c: The counseling manual will be distributed through the same network established for distribution of the consumer guide by 1983.

Objective 3: Indirect measures of access will be developed based on information concerning the appropriateness of placements.

LRRA 3: The Department of Health will obtain data from the Iowa Medical Foundation on the appropriateness of placements in long term care facilities and hospitals by 1981.

- State Goals and Objectives Concerning Continuity of Care -

GOAL 4: THE CONTINUTIY OF LONG TERM HEALTH CARE WILL BE ASSURED FOR ALL CONSUMERS.

Objective 1: By 1986, all providers of in-home health care will participate in a coordinated assessment and referral system.

SRRA 1: The State Departments of Health and Social Services will collaborate with the Commission on Aging to assess all current program standards and procedures for in-home services.

LRRA 1: The State Department of Health and Social Services and the Commission on Aging will develop and sign agreements for the exchange of client information and coordination of services by 1982.

Objecitve 2: The Department of Health will assess problems with discharge planning and continuity of care for all long term care providers.

SRRA 2: The Department will the consult with the Iowa Foundation for Medical Care and survey Home Health Agencies on this question.

LRRA 2: The Iowa Foundation for Medical Care will conduct a quality assurance study to evaluate discharge planning in nursing homes and make its findings available to the Health Department by 1982.

Objective 3: The State of Iowa will have a more integrated process for human services planning by 1986.

SRRA 3: The Department of Health will communicate this objective to all relevant state agencies, the legislature, and the Governor's office to solicit their comments and suggestions.

SRRA 3a: Based on the comments and suggestions received the Health Department will draw up priorities for developing a more integrated human service planning process.

GOAL: INCREASED AVAILABILITY OF AND ACCESSIBILITY TO A FULL RANGE OF MENTAL HEALTH/SUBSTANCE ABUSE SERVICES IN A VARIETY OF SETTINGS TO ENSURE APPROPRIATE CARE.

GOAL: INCREASED NUMBER OF INDIVIDUALS WHO ARE ABLE TO SATISFACTORILY COPE WITH SCHOOL AND WORK SITUATIONS, FAMILY CONFLICTS, AND OTHER DAILY PROBLEMS.

Objective: By 1986, an increased number of children and adolescents able to satisfactorily cope with school situations, family conflicts, and other daily problems.

Objective: By 1986, Area Education Agencies, Community Mental Health Centers, and Mental Health Institutes cooperate in developing preventive programs for mental disorders and substance abuse for children and youth.

Objective: By 1986, coordination of public and private treatment services of mental disorders and substance abuse for children and youth.

Objective: By 1986, comprehensive service for children must be available to a population base of 75,000 to 200,000 though not necessarily located within each county.

SRRA: Area Education Agencies cooperate in developing programs to sensitize physicians, schoolnurses, teachers, and other personnel to become more sensitive to mental health problems in school children so early indications of problems are discovered and appropriate referrals are made.

GOALS: BY 1986, ALL MENTAL HEALTH SERVICE PROVIDERS SEEK MASS MEDIA EXPOSURE, INFORM HUMAN AND HEALTH SERVICES AGENCIES OF THEIR SERVICES, AND COOPERATE IN SERVICES REFERRALS.

Objective: By 1986, an increased number of elders and handicapped able to satisfactorily cope with life experiences and daily problems.

Objective: By 1986, increased acceptability of mental health/substance abuse services by the elderly and handicapped.

GOAL: AVAILABILITY AND ASSESSIBILITY OF MENTAL HEALTH SERVICES TO LOW INCOME INDIVIDUALS.

Objective: Increased access to mental health services by low income individuals through greater flexibility of the sliding fee schedules.

Action Steps: Consult with the Iowa Mental Health and Iowa Substance Abuse Authorities regarding developing more flexibility in the sliding fee scales through greater agency responsiveness to an individual's personal financial situation.

Goal: Availability and assessibility of mental health services to ethnic and racial minorities in Iowa.

Objective: Needs assessment of Asian and migrant worker mental health needs by 1981.

SRRA: Consult with Iowa area health systems agencies and Mental Health Authority of the need for such an assessment.

Objective: Include special sub-populations (Asian, migrant workers) in the planning analysis for future services.

SRRA: Consult with Iowa area health systems agencies and Mental Health Authority ofthe need to include minority groups in community analyses of needed services.

GOAL: INCREASED AVAILABILITY OF AND ACCESSIBILITY TO A FULL RANGE OF MENTAL HEALTH/SUBSTANCE ABUSE SERVICES IN A VARIETY OF SETTINGS TO ENSURE APPROPRIATE CARE.

Objective: By 1986, outpatient mental health/substance abuse services should be offered on a regularly scheduled basis and on a 24-hour emergency walls in basis.

PART TWO

Deleted or substantively changed 1980 goals, objectives and recommended action steps with rationale.

Preventive Services - Promotion Strategies

The following goal, objective and action step were deleted since the Department of Environmental Quality no longer sees this area as a priority issue.

Noise Control

Goal 5: NOISE IN URBAN AND RURAL AREAS LESSENED OR MAINTAINED AT DECIBELS ACCEPTABLE TO THE ENVIRONMENTAL PROTECTION AGENCY AND DEPARTMENT OF ENVIRONMENTAL QUALITY, IN ORDER TO DETER ANNOYANCE, MENTAL ANGUISH, AND AFFECT POSITIVELY PERSONAL COMFORT AND WELL-BEING.

Objective 1: By 1985, noise levels in SMSAs in conformance with Environmental Protection Agency noise standards:

- 70 dB or less anywhere
- 55 dB or less outdoors
- 45 dB or less indoors

SRRA 1: By 1980, development of a State Plan of Action regarding noise pollution based upon the study undertaken by DEQ.

Acute Care

The following goal was changed for clarity.

GOAL 1: MINIMIZING THE ADDITION OF DUPLICATIVE AND UNDER-UTILIZED ACUTE CARE CAPACITY AND EQUIPMENT.

The following action step was changed to conform to a modified work program to undertake appropriateness reviews.

LRRA 1: By 1983, the Department of Health will project population needs for specific acute care services as a part of the Department's responsibilities to conduct an appropriateness review of the health care system.

Language was changed in the following action step to conform to a modified work program to undertake appropriateness reviews.

LRRA 2: By 1985, the Department will draft Certificate of Need Standards for specific acute care bed units and services that will be consistent with the outcomes recommended by the research undertaken during the appropriateness review.

As this relates to Goal 1, Objective 4: The task was not completed and was postponed until 1982.

SRRA 4: By 1982, the Department will publish a guide for hospital administrators, informing them of their specific obligations

under the Certificate of Need law.

As this relates to Goal 2, Objective 1: The threshhold was extended to 1986 and the target rate changed to conform to population and projection changes.

Objective 1: By 1986, a state average inpatient utilization rate of no more than 1,248 patient-days per 1,000 population per year.

As this relates to Goal 2, Objective 1: The order of action steps was moved for clarity.

LRRA 1: By 1983, the Department will complete an analysis of the reasons for use-rate variation among Iowa's counties, in order to establish appropriate variances in the expected county use rates.

LRRA 1a: By 1985, the Department will complete a utilization study to determine potential optimum utilization levels for different age groups in Iowa.

LRRA 1b: By 1985, the Department will analyze state legislation and programs which can provide an incentive for encouraging outpatient treatment as an alternative to inpatient care wherever possible. The Department will also seek to identify programs and laws which provide an incentive for inpatient usage, so that those programs and laws may be changed.

As this relates to Goal 2, Objective 1: This task was achieved in 1980.

SRRA 1: By 1981, the Department will provide to the P.S.R.O. county-by-county in-patient utilization data.

As this relates to Goal 2, Objective 1: This task is postponed until 1982.

SRRA 1: By 1982, the Department will begin monitoring the aggregate in-patient utilization rates in Iowa. These annual reports will be made available to the P.S.R.O., the SHCC and interested persons.

The following goal, objective and action step are relocated in the primary care chapter, where the major discussion of HMOs is included. Subsequent goals are renumbered.

GOAL 3: ALTERNATIVE DELIVERY SYSTEMS BE AVAILABLE IN IOWA.

Objective 1: By 1985, at least three HMOs be serving consumers in Iowa, if they are found to be financially feasible.

LRRA 1: By 1983, the Department will monitor the feasibility study for an HMO-IPA in Des Moines and, if feasible, will assist in developing plans for the HMO-IPA.

The following action step is deleted since technical assistance can be obtained from the Federal government.

LRRA 1a: By 1982, the Department will send a letter to community leaders in each of the State's metropolitan areas informing them of the availability of technical assistance for investigating the feasibility of a prepaid medical delivery system.

The following goal is changed for clarity; it deals only with inpatient capacity and not services and equipment.

GOAL 3: ELIMINATION OF UNNECESSARY INPATIENT BED CAPACITY.

The following objective has been changed for clarity and simplicity; no substantive changes have been made.

Objective 1: By 1985, the State will be in compliance with the adjusted national guideline goal of an average of 4.4 inpatient beds for every 1,000 persons.

The following action was omitted because the federal regulations for conducting appropriateness review make this action unnecessary in the State Health Plan.

LRRA 1: By 1985, the Department will develop a program for the implementation of appropriateness reviews of all institutional and home health services offered in the state, in conformity with federal regulations filed subsequent to the enactment of the Health Planning and Resource Development Amendments of 1979. Wherever possible the department should seek and assist interested facilities in seeking federal financial assistance for the discontinuance of unneeded hospital services or conversion of unneeded services, in accordance with Title III of the amendments.

The following is a new recommended action.

SRRA 1: By 1981, the Health Facilities Council will begin applying the Acute Care Bed Needs Methodology standard, adopted by the SHCC, to all applicants seeking a Certificate of Need to remodel, reconstruct or renovate hospital inpatient bed space or to increase the facility's capacity while unnecessary beds exist.

This action reiterates the standard.

In the following action step consolidation is included in the plans for regionalization to achieve the stated goal and to conform to the remedial plans for appropriateness review.

LRRA 1a: By 1985, the Department will work with the Iowa Hospital Association and the University of Iowa Health Center to develop a plan for consolidation regionalization of Iowa's hospitals.

As this relates to Goal 4 (formerly Goal 5): The following objective was changed to conform to the most recent research on measures of hospital-incurred inflation. See text explanation for greater detail.

Objective 1: By 1986, the annual rate of hospital charge increases in Iowa

be no more than the annual change in the National Hospital Input Price Index.

The following is a new recommended action.

SRRA 1: By 1981, the Department will evaluate the compliance of the Iowa Voluntary Cost Containment Council's efforts to achieve this objective.

This recognizes that a voluntary effort exists and that its accomplishments will determine the degree to which nonvoluntary actions may be warranted.

The following change recognizes the desirability of pursuing voluntary approaches first.

LRRA 1: By 1983, the Department will investigate the feasibility of prospective rate setting for all medical costs, in the event that this objective has not been met through peer control.

The following change emphasizes the desirability of pursuing other actions first, but does not substantively change the action step.

LRRA 1a: By 1986, the Department will analyze the potential for hospital rate review, in the event that other measures do not achieve this objective.

As this relates to Goal 5 (formerly Goal 6), Objective 1: The following action step has been changed for clarity.

LRRA 1: By 1983, the Department will work with interested health consumer groups to draft legislation identifying the rights and responsibilities of consumers and providers of health care.

The following goal, objective and action step were deleted because the State Emergency Medical Services agency is currently reevaluating the entire emergency response system in Iowa. Their plan will address new goals and will more thoroughly inventory the future needs. When that plan is available a goal will be drafted for the SHP that will conform to their recommendations.

GOAL 7: EMERGENCY FACILITIES BE AVAILABLE AND ACCESSIBLE TO ALL IOWANS.

Objective 1: By 1985, all Iowans will be within 45 minutes of a community emergency facility (Level III) and within 75 minutes of a regional emergency facility (Level II).

The following goal has been changed for clarity.

GOAL 1: CONSUMERS AND PROVIDERS WILL HAVE ADEQUATE INFORMATION ON LONG TERM CARE SERVICES.

The following objective and action step have been postponed until later dates.

Objective 1: A statewide consumer guide to long term health care services will be available to consumers, providers and any interested public agencies by 1982.

SRRA 1: A survey will be conducted by the Department of Health in cooperation with the Iowa State Commission on Aging to determine the information considered most useful by consumers and providers in selecting types of care and specific providers by March, 1981.

LRRA 1: The Department of Health will publish the guide by March, 1982.

As this relates to Goal 1, Objective 2: Due to time constraints implementation of the following action steps needs to be extended.

LRRA 2: The Department of Health will convene a consulting group of educators, providers and public officials to provide advice on the manual by June 1981.

LRRA 2a: The Department of Health will establish funding for the counseling manual by January 1982.

LRRA 2b: The Department of Health will publish the manual by June 1982.

As this relates to Goal 2: The following objective and action steps have been deleted until more research has been done.

Objective 1: Written discharge planning agreements will exist between all types of major institutional providers of long term health care and other appropriate providers by 1985.

LRRA 1: Written discharge planning agreements between nursing homes and home health agencies exist as a condition of licensure for nursing homes by 1982.

LRRA 1a: Written discharge planning agreements exist between hospitals and home health agencies as a condition of licensure for hospitals by 1983.

As this relates to Goal 3, Objective 1: The following action step has been changed to short range. The following LRRA has been renumbered.

SRRA 1: The Department of Health will develop and test an instrument for measuring outcome of care by 1981.

LRRA 1: The Department of Health will develop and implement a management information system for collecting and reviewing data on the outcome of care by 1985.

As this relates to Goal 3: The following objective and action step have been deleted; they were evaluated as not addressing the quality issue, and referred for more legal research.

Objective 2: All plans of long term care required by licensure or for public reimbursement will specify an individual health care provider or a position within the health care organization responsible for implementation of the plan by 1985.

LRRA 2: Health Facilities Licensing (the Health Department), the Iowa Department of Social Services, and Medicare fiscal intermediaries will include this objective as a part of their rules and regulations for licensure and reimbursement.

As this relates to Goal 4: The following objectives and action steps have been delayed until later dates due to lack of resources.

Objective 1: Actual distribution and numbers of Public Health Nurses by county will be based on research conducted by the Department (Office for Health Planning and Community Services) by 1986.

LRRA 1: Standards for the minimum number of Public Health and Home Health Nurses will be set by county using the Western Interstate Commission on Health Education or similar manpower model to be applied by the Department of Health by June 1982.

LRRA 1a: The Department of Health will prepare a cost-effectiveness report on the effect of implementing the minimum standard, and recommend state funding to the legislature by 1983, based on, and as as part of, this record.

Objective 2: The actual distribution of nursing care beds by county will be based on standards established by the Department of Health by 1986.

As this relates to Goal 4, Objective 3: The following action step is estimated to be completed within the next month.

SRRA 3: The Department and the Iowa Department of Social Services conduct a survey of home health agencies to identify financial and administrative barriers to full reimbursement of all home health services.

The following action step has been deleted pending results of the survey of home health agencies to determine barriers.

LRRA 3a: By 1983, consultation with a physician on plans of care rather than physician approval of plans will be required for public reimbursement of home health care services. (Plans of care to be be developed by registered nurses in Medicare certified agencies.)

As this relates to Goal 4, Objective 4: The following action step has not begun.

SRRA 4: Any reasons for the small number of skilled nursing care beds in Iowa related to licensure or Certificate of Need will be investigated by the Department and a report written.

The investigation referred to in the following action step is now being made by the Department of Social Services.

SRRA 4a: Any reasons for the small number of skilled nursing beds related to reimbursement policies will be investigated by the Department of Social Services and the Medicare fiscal intermediaries and a report submitted to the Department.

The Department of Social Services will sponsor a study of ICF reimbursement as set forth in the following action step.

LRRA 1: By 1982, the Iowa Department of Social Services will have investigated alternative schemes for Medicaid reimbursement of nursing home care including:

(1) prospective payments;

(2) payments for services delivered;

(3) performance or outcome differentials; and

(4) adequate reimbursement and more extensive coverage of rehabilitation and maintenance services.

Chapter Three

Preventive Services

INTRODUCTION TO AN ANALYSIS OF STATEWIDE POLICIES AFFECTING PREVENTION

This Prevention Chapter looks at fifteen priority determinants of preventable illness:

- smoking
- substance abuse
- nutrition
- exercise
- stress
- toxic agents
- occupational safety and health
- accidents
- infectious agents
- fluoridation
- pregnancy and infant care
- family planning
- sexually transmitted disease control
- immunization
- hypertension

An analysis which is given within this chapter of morbidity and mortality data and decisions of the Prevention Task Force, which advised Staff on the writing of this chapter, and of the Statewide Health Coordinating Council, yielded these fifteen priority areas.

The introductory section of this chapter gives some general analysis of illnesses which lead to the prioritizing of these fifteen determinants of illness. Within each of the sections on the fifteen determinants, more detailed analyses are presented. Definitions and an explanation of the organization of the system which creates health and illness are contained in this introductory section.

Definition of Prevention, Illness and Death

Put simply, to prevent illness or death among Iowa's population means to lessen or, in a few cases, to eliminate rates of morbidity and mortality.

Morbidity rates are the incidence or the prevalence rates of illnesses. Incidences are rates at which illnesses onset during a particular period usually a year in a particular population. For example, the incidences of pneumonia among Iowans during 1977 was 4.71 /10,000 population. Prevalences are rates of illness at a point in time, usually at the time a survey occurred in a particular population without regard to when the illness onset. An illness is a:

- diseases - chronic or acute;
- impairment - physical defect or emotional disorder; or
- disability - inability to work, to attend school, or to maintain a household because of a disease or impairment.

Mortality rates are rates of death from illnesses.

Prevention Issues Addressed

As this chapter examines rates of morbidity and mortality, the 15 determinants of preventable mortality and morbidity, the "system strategies" which are in place to change these determinants, several questions are in mind to be answered.

- Which and by how much are illness and deaths are preventable and by how much? Lifestyle, the environment, biology, and health care services are identified as general factors which determine rate of illness. The fifteen priority determinants are all classified under one of these general determinants.
- What are the direct and indirect costs if rates of illness increase, decrease, or continue at their present levels?
- What are the barriers to changing and the degree of difficulty of changing these four general and fifteen priority determinants of illness and deaths which are preventable?
- Barriers, which may block changes in any of the four factors which determine rates of illness, are the lack of:

  - education,
  - regulation,
  - economic incentives,
  - technology,
  - or health care services.

The difficulty of changing these factors is a function of the values and attitudes of Iowans as reflected in national and state programs and policies, as well as the magnitude and scope of the barrier itself.

Overview of Preventable Health Status Problems

For Iowa, unfortunately, no central clearing house exists to disseminate morbidity data. So without uniform or complete morbidity data for many illness rates the initial analysis here of health status is based solely on mortality data. However, within many of the fifteen sections of this chapter Iowa morbidity data is detailed. Through analysis of Iowa mortality data (See Table 1) this chapter establishes the significance of the four factors, lifestyle, the environment, biological, and health care services which determine preventable death.

On page 57, Table 1 shows the years of life lost from the ten leading causes of premature death in Iowa and in the U.S. to six of the seven SHCC priority health problems. Table I also describes for the nation, by cause of premature death, how much each of four factors---biology, the health care system, lifestyle, and the environment--contributes to the years of life lost from premature death.

TABLE 1

PERCENTAGES OF TOTAL YEARS OF LIFE LOST AMONG PERSONS LESS THAN 75 WHICH ARE ATTRIBUTABLE TO THE LEADING CAUSES OF DEATHS AND PERCENTAGE OF PREMATURE DEATHS IN U.S. BY CAUSE WHICH COULD BE PREVENTED BY OPTIMAL CHANGES IN CONTRIBUTING FACTORS

Cause Of Death	** YEARS OF LIFE LOST		OPTIMAL CHANGES IN CONTRIBUTING FACTORS				
	Iowa	U.S.	Health System	Life Style	Environment	Human Biology	Total
Cancer	25.8%	21%	10%	37%	24%	29%	100%
Circulatory Diseases							
Heart Disease	25.5%	24%	12%	54%	9%	28%	100%
Cerebro-vascular Disease	3.5%	4.6%	7%	50%	22%	21%	100%
Accidents							
Motor Vehicle	28.2%	9.8%	12%	69%	18%	6%	100%
All Other		8.4%	14%	51%	31%	4%	100%
Mental Disorders							
Suicide	5.7%	4.4%	3%	60%	35%	2%	100%
Homicide	1.4%	4.4%	0%	66%	41%	5%	100%
Substance Abuse							
Cirrhosis of Liver	2.0%	3.1%	3%	70%	9%	18%	100%
Communicable Diseases							
Influenza & Pneumonia	1.5%	2.0%	18%	23%	20%	39%	100%
***Diabetes	1.8%	1.4%	6%	26%	0%	68%	100%
Total			10%	51%	20%	20%	100%

Source: Public Health Services, Center For Disease Control, Ten Leading Causes of Death in the United States, 1975

**Iowa data are from calendar year 1977, United States data from calendar year 1975; only the ten leading causes of years of life lost among the population <75 of each entity are listed, by percentage of total years of life lost among population <75.

***Although diabetes was not chosen as a Statewide Health Coordinating Council priority health status problem, diabetes contributes significantly to deaths from such circulatory conditions as heart disease, arteriosclerosis, and cerebrovascular disease. Of the over 140,000 Iowans who are estimated to have diabetes, 50,000 persons do not know that they have it.

Lifestyle factors are personal behaviors of the individual, and include eating, drinking, exercising, using and abusing substances and coping with stress. Environmental factors are social, economic and physical variables, such as family living situations, safety of dwellings, safety of consumer products, income and environmental quality. Human biological factors are genetic variables. Health care system variables include all aspects of heatlh care.

Table one indicates that:

- Lifestyles contribute to about 50 percent of years of life lost from the ten leading causes of premature deaths.
- The environment contributes to about 20 percent of such years lost from premature deaths.
- Human biology also contributes to about 20 percent of years lost from the ten leading causes of premature deaths.
- The health care system could contribute only to a reduction of about ten percent of these premature deaths.

Clearly, changing lifestyles would have the greatest impact on preventing premature deaths. However, no single strategy to impact any one of these four factors is sufficient. Lifestyle changes in an obese, hypertensive, low-skilled worker will not come about without accompanying changes in his or her social and economic environments. Declines in the rates of premature mortality of Iowans will come about as a result of understanding the complex interplay of lifestyle, environmental, biological, and health care system, and of implementing a policy of preventive programs which reflects this complex interplay.

The Costs of Not Preventing Illnesses

Table 2 shows the national costs of the seven priority health status problems projected for the year 2000. Indirect morbidity costs include the value of lost productivity in school, employment, or housework. Indirect mortality costs include the value of lost future earnings had people not died before their participation in the labor force ended. Direct costs are those dollars spent for services within the health care system.

In preventing premature deaths and unnecessary illness, that is, in implementing well thought-out policies on preventive services, we will avert in part, Iowa's share of the predicted $2,095,000,000,000 costs associated with mortality and morbidity nationally in Table 2.

TABLE 2

COSTS OF ILLNESS IN BILLIONS OF DOLLARS IN YEAR 2,000
AND PERCENTAGE DISTRIBUTION OF THE COSTS

	TOTAL COSTS		DIRECT COSTS	INDIRECT COSTS		
Disease Category	(%)	$(In Billions)	(%)	Total (%)	Morbidity (%)	Mortality (%)
Circulatory Disease	17.5%	$366	13.4%	21.2%	13.9%	25.3%
Accidents	14.6%	306	6.1%	22.5%	11.0%	28.5%
Cancer	8.1%	171	4.9%	11.2%	2.0%	15.9%
Mental Health	6.8%	143	8.5%	5.2%	13.0%	1.2%
Complications of Pregnancy & Childbirth	4.9%	104	6.6%	8.1%	15.7%	4.2%
Communicable Diseases	2.0%	41	1.7%	2.2%	3.2%	1.6%
All Others	51.0%	1131	58.8%	29.6%	4.3%	23.3%
Total	100.0%	2095	100.0%	100.0%	100.0%	100.0%

Source: The Current Burden of Illness in the U.S., National Academy of Science. Cost of Disease of Illness in the U.S. in the Year 2,000, Public Health Report, Vol. 93, N. 5, Sept. Oct. 1978.

System Strategies

Prevention strategies can be classified in two ways; by the time at which the strategy is supposed to intercept the progression of an illness, and by the method which the strategy aims to change the problem. In the first classification, preventive strategies may be:

- Primary - to prevent occurrence of disease; or
- Secondary - to intervene after occurrence, but before the disease is symptomatic; or
- Tertiary - to stem the progression of symptomatic disease.

In the second classification, preventive strategies may:

- Promote health in population groups - through changing lifestyles by encouraging smoking reduction, improved nutrition, fitness, stress control, etc., and through impacting social, physical, political and economic environments to make them more conducive to health.
- Protect health in population groups - through regulating the environment by accident control, occupational and environmental health regulation, and community fluoridation; and
- Offer preventive health care for individuals - through direct care services such as family planning, immunizations, hypertension screening and follow-up, etc.

Health promotion and protection strategies are primary prevention. That is, they generally intervene before illness occurs. However, inevitably strategies to

promote and to protect health also intervene to improve the health of those parts of the population which are ill. HEW defines health promotion as any combination of health education and related policital, economic, and social strategies used to facilitate people choosing a change in their behavior and their environments conducive to health. Health protection includes mainly regulation and surveillance to control the environment and personal behavior. As defined here health promotion strategies encompass people's participating in creating policies, programs, and lifestyles which affect their health, as well as being educated about influences on their health.

Health promotion and protection involve not what is typically thought of as health care. Instead, health promotion includes health education, exercise programs, income transfer programs, such as food stamps, and the supplemental food programs, such as WIC. These promotion programs psychologically, socially and economically allow or motivate persons to change illness producing behavior.

Health protection includes environmental regulatory programs, occupational regulatory programs, vector control programs, and community water fluoridation programs, among others.

In the main, preventive health care for individuals results in secondary and teritary prevention - intervention after illness occurs, and is provided by physicians, nurses, and public health care workers. Preventive health care detects and treats presymptomatic or early symptomatic illness. However, as some health protection and promotion services protect the sick as well as the healthy, so do some health care prevention services go beyond detecting and creating symptoms. Genetic counseling, family planning, and immunization services are preventive health care which prevents the occurrence of illness. The preventive health care services may include health education to promote health lifestyles.

Preventive health care also includes venereal disease detection programs, well-child and well-elderly clinics and hypertension screening clinics, as well as checkups in physicians' offices and physician treatment of early symptomatic illness. Physician care as secondary and tertiary prevention is discussed in detail in the Primary Care Chapter, rather than in this Chapter.

Table 1, on page 57 showed how premature mortality is brought about by four factors: the environment, biology, the health care system, and lifestyle. The following four paragraphs explain specifically the link between the three preventive strategies which we just defined and the four factors which contribute to premature mortality.

Lifestyle: Influenced by Promotion Strategies

According to Table 1, lifestyle factors account for 50% of the years of life lost from premature mortality related to the ten leading causes of death in the nation. People change their lifestyles through health promotion strategies that allow or provide incentive for changes in behavior. Health education is one such strategy.

Environment: Influenced by Promotion and Protection Strategies

All environmental factors account for about 20% of the years of life lost from premature mortality in the nation. The economic and social environments, as is lifestyle, are changed through health promotion strategies such as direct and indirect income transfer programs. Food Stamps, and the Women, Infants and

Children Project enable people to choose to eat more nuitritional foods, (change their life-styles), as well as to increase their food buying (change in the socioeconomic environment). Physical environmental factors are changed through health protection strategies, the enforcement of automobile speed limits and air pollution standards. The interplay of health promotion/portection strategies as they impact lifestyle and the environment (which factors together account for 70% of the years of life lost from premature deaths) is significant. No health education program can hope to appreciabley change personal behavior without being accompanied by changes in the socioeconomic and physical environment which lead to that behavior. For the poor and near poor in Iowa, about 14% of our population, income boosting programs affect the socioeconomic environment so to allow health education to yield changes in behavior. For persons who smoke, or who drive too fast, sales taxes, traffic fines, higher insurance premiums, and disincentives for companies to produce unhealthy products are health protective strategies which change the socioeconomic/physical environment and behavior.

Biology and Health Care Services: Early Treatment and Diagnosis Strategies

In Table 1 biological factors accounted for 20% of the years of life lost from premature deaths. Preventive health care strategies such as family planning and genetic counseling services aid individuals in making decisions about having children when risks of congenital disorders are high. But in many instances, biology is simply not able to be chaned through any prevention strategy.

Health care services are factored out in Table 1 as being able to prevent around 10% of the years of life lost from premature mortality. Preventive health care services also are defined in this chapter as a prevention strategy.

Screening clinics and immunization are health care preventive services. While able to deter only 10% of the preventable years of life lost, preventive health care strategies are often given much weight in the schema of prevention services. This is the case, in part, because the health outcomes of direct health care are more easily measured than are the health outcomes of an income transfer program such as the food stamp program. While health care services are vital to any plan to effect the interplay of factors which cause preventable mortality, over-reliance on the strategy health care services to prevent illness can result in an ineffective plan.

Summary

From the analysis in this section we can conclude:

For maximum effectiveness state policies and programs for preventing illness and death should be multi-strategied, but should concentrate on health promotion and protection strategies to impact lifestyles and the environment. These two factors account for 70% of preventable years of life lost, which health care services account for only 10% of preventable years of life lost.

Promotion strategies to impact lifestyle factors should seek foremost to impact the SHCC's priority health problems of mental disorders, substance abuse, circulatory diseases, and accidents, as lifestyle most influences these causes of premature mortality when compared to other causes of the same.

Protection as promotion strategies to impact the environment should seek foremost to impact the SHCC's priority health problems of mental dis-

orders, accidents, cancer, and communicable diseases, as the environment highly influences these causes of premature mortality when compared to other leading causes.

STATE POLICIES ON THE OVERALL ORGANIZATION AND FUNCTION OF PREVENTION: A LOOK AT LOCAL PUBLIC HEALTH DEPARTMENTS AND SCHOOL AND COMMUNITY HEALTH EDUCATION

State "umbrella policies" on the organization and function of prevention are contained in many parts of the Code of Iowa which create:

- state department of health
- local departments of health
- state department of public instruction
- community education
- various other code sections

The organization and function of prevention as found in local public health departments and health education/programs are detailed here because their organization and functioning emerge as problems in the analyses of many of the fifteen preventable determinants of health which follow in this chapter. The organizational function of health education and local public health departments impact almost all of the fifteen priority determinants of preventable illness and death.

Local Public Health Departments

District Health Departments...Why and How, which the State Health Department adopted in 1974, identifes eight basic health services which every local health department should offer;

. program planning
. communicable disease control
. community health education
. public health nursing - including maternal and child health, school health and home health, and chronic disease control
. dental health
. laboratory services
. accident prevention/occupational health
. environmental control

District Health Departments...Why and How recognizes that, in most instances, to provide these eight basic services local health departments need to group themselves into district health departments, in much the same way that local school districts were consolidated, and Area Education Agencies were formed through legislation passed in the 65th General Assembly. Economic and human resources are scarce for public health. Maximum benefit to local residents from these scarce resources demands that local health departments have a population base larger than a county to support these eight services.

The 1974 Plan contains an inventory of local public health services in 1973. Although somewhat outdated, this inventory shows that: 48 counties had no regulation to protect their citizens against environmental hazards; only 86 counties provided public health nursing services (98 counties now provide nursing services); and no county provided all eight of the basic public health services. Seventy-two counties spent less than $2.00 per capita on public health services.

To date, only one district health department has formed in Iowa, in Woodbury County.

The 1974 Plan identifies four major barriers to the estalishment of cost effective district health departments. These barriers are the:

- Lack of understanding regarding the importance of public health services.
- County government tradition and turf protection.
- Lack of coordination among state agencies providing public health service which confuses and further fragments public health services at the local level. Many state agencies write regulations which local health departments are to follow.
- Deficiencies in Ch. 137 of the Code which does not provide for financial and state administrative support for district departments through state funds. (A recent opinon from the State Attorney General's Office interprets Ch. 346A (See page 64 of this Plan) of the State Code such that local district health departments may levy their own taxes. However, this revenue generating ability which district health departments have is not well known about the State.)

Optional strategies which are suggested in District Health Departments...Why and How to overcome the first two of these four bariers include the formation of either of:

- an informal areawide health consortium,
- a district health ssociation, or
- a legally recognized district health department.

In the formation of an informal consortium, regular meetings take place between member counties to exchange information, discuss common public health problems, plan and provide continuing education for public health personnel, and plan and provide a program of public health education for all cooperating jurisdictions.

In the second strategy, establishing a district health association, at least four counties are involved with a coordinating board and a single director. The association provides public health services to the entire area. The association does not have legal certification from the state, and individual county or city elements can easily separate if dissatisfied with the association.

The district health association is a multi-county organization (it should involve at least four counties and no less population than that of the smallest of the Governor's 16 planning regions) with a coordinating board and a single director. It is responsible for providing public health services to the entire area the counties jointly comprise. It does not have legal certification from the state as a direct health department and individual county or city elements may easily separate from the association if they become dissatisfied with the mutual agreements.

The legally recognized district health department has a multi-county base with a single board of health, a single director, and responsibility for providing public health services to the entire organized area. It has applied for and received official recognition as a direct health department under the laws of Iowa. A county or city component affiliated with a legally recognized district health department cannot withdraw from it without the approval of the district and state boards.

Which alternative is most suitable for a particular area is a decision that must be made locally after attitudes have been carefully assessed.

While it might seem that the district health association has a possible advantage in being easily dissolved if it proves unworkable, the legally recognized department has the more positive advantage of inducing its affiliates to work out their problems instead of disbanding in frustration.

The consortium is easiest to organize, since it presents no threat to the jurisdistion of local governments. A legally recognized district health department is the most difficult to organize because it is the most difficult to dissolve should the affiliates become dissatisfied with the department's achievements.

Of these three alternatives, District Health Departments...Why and How recommends that an association be the first organizational step that be taken to gain more coordinated local public health services.

With regard to the third and fourth barriers to establishing district health departments, possible strategies to increase coordination between local and state public health programs, and to gain additional financing for local public health services include:

- seting up of regular meetings between a committee of state and local officials in which solutions to fragmented direction from the state level are established;
- forming of district health departments as associations which, themselves, may facilitate communication with the regional and state offices of the State Department of Health's Health Engineering and Public Health Nursing Section, and of the State Department of Environmental Quality;
- amending the Iowa Code, Chapter 137, such that direct state financial and administrative support of district health departments is provided;
- disseminating information of the tax levy capability allowed district health departments through recent State Attorney General interpretation of Chapter 346A, Code of Iowa, 1979.

Health Education

What is health education? Health education promotes, in a noncoercive manner, personal behaviors that contribute to health. Health education averts sickness producing behavior. Health education reduces costs associated with illness by reducing hospital admissions, by reducing the number of work days lost, and by reducing premature mortality associated with illness.

A general awareness exists among health care providers, including public health providers, physicians and third party reimbursers, that the benefits resulting from medical technologies have almost reached their maximum. Further reductions in the nature and extent of health problems will largely be the result of changes in lifestyle and the physical and socioeconomic environment.

Health education may take place in many settings: the school, the work place, the home, the physician's office, the community, and the hospital. To be most effective as a health promotion strategy, health education should be received from the time a person first makes choices about his or her behaviors contributing to health.

Because of time and staff limitation, this year's State Health Plan looks in

detail only at health education in the school setting, and in general at health education in the community setting.

The present state of school health education in Iowa was summarized in the 1979 Comprehensive School Education Final Report to Dr. Benton, State Superintendent of Public Schools and State Board of Public Instruction.

The Task Force surveyed the local school districts to determine the present status of health education in Iowa. The survey instrument was sent to 447 school district superintendents in the State. Three hundred-ninety returned the survey for a return rate of 87.2. Results are reported in terms of percentages of school districts. For some questions in the survey, respondents could check more than one answer; therefore, percentages, in some cases, total more than 100%.

A. Health education is taught in a variety of settings in Iowa schools:

Percentage in:	K-3	4-6	7-9	10-12
1. Health Course	44	47	41	33
2. Physical Education Program	42	45	62	67
3. Science Program	59	66	71	22

B. The following teachers have responsibilities in teaching health education:

Percentage in:	K-3	4-6	7-9	10-12
1. Health Teacher	3	4	16	12
2. Classroom teachers who basically have other responsibilities	91	89	54	42
3. Home Economics Teacher			35	51
4. School Nurse	37	43	32	27
5. Physical Education Teacher	32	37	61	67
6. Guidance Counselor	1	3	7	6

C. Iowa school health curriculum is:

	Percentage
1. Developed by individual teachers	47
2. Commercially developed	44
3. Developed by local school	20
4. Developed by school district	20

D. The frequency that students study health in Iowa schools is:

Percentage in:	K-3	4-6	7-9	10-12
1. 2+ hours/week	3	8	14	9
2. 2 hours/week	8	14	11	6
3. 1 hour/week	39	39	26	21
4. 2 hours/month	17	11	12	10
5. 1 hour/month	3	3	4	5
6. Irregularly	28	24	32	45
7. Not at all				2

E. The emphasis in health education in Iowa school districts is on:

	Percentage
1. Personal health	64
2. Nutrition	45
3. Safety and first aid	33
4. Family life and sex education	22
5. Substance abuse	20

F. A wide variety of curriculum mateials is used for health education in most school districts (textbooks, filmstrips, films, wall charts and posters, models, brochures, pamphlets and materials from public and private health agencies).

G. The decision regarding which specific curriculum materials will be used in the teaching of health education is made by:

	Percentage
1. Classroom teacher	93
2. Principal	81
3. Nurse	49

In summary, health edcuation in grades K-12 is most often taught in the science and physical education curriculums. In grades K-6, health education is usually taught by the self-contained classroom teacher who basically has other responsibilities. The physical education teacher is the one who most often teaches health education in grades 7-12.

In Iowa schools, students usually study health education one hour per week or on an irregualr basis. The emphasis in health education in Iowa school districts is in the areas of personal health and nutrition. The classroom teacher and building prinicipal usually decide which specific curriculum and materials will be used in the teaching of health education. The results of this survey indicate the need for carefully planned and coordinated comprehensive health education programs in Iowa schools.

In the community setting, health education is a part of adult education programs, of the nursing services of local public health departments, and of voluntary health organizations' work. The heart Association, the Iowa Chapter of the American Cancer Society, the Diabetes Association are among the voluntary health organizations conducting community health education. However, no comprehensive inventory of the location and kinds of comunity health education programs in the state has been developed. The development of a community health education inventory would be one of the first steps to take in bringing about greater coordination between agencies which provide community health education in Iowa.

In FY 1980, the State Department of Health applied for a $71,000 grant; the Community Health Division of the Iowa State Department of Health will establish a program which will: focus community health education activities in the State; inventory current health education-risk reduction activities in the State; plan additional coordinated health education-risk reduction activities; and conduct several specific pilot health education-risk reduction activities during FY 1980 with State employees who are based in Des Moines.

In Iowa, certain barriers exist to effective health education. These barriers are the: scarcity of funds; the shortage of trained personnel; piecemeal

approaches to health education by schools and by health agencies; the lack of coordination between health education providers; the lack of evaluation and program objectives to measure changes in behavior, rather than solely information dissemenation; and the lack of awareness of the role which health education can play in changing behavior and in producing healthier lifestyles.

Of these four barriers to more comprehensive and coordinated health education in Iowa, one of the most primary is the bind for tax dollars in which local school districts and local health departments find themselves. When strapped for dollars to provide currently mandated services, local schools are reluctant to add health education to their curricula. Also, county boards of health rely mainly on county tax revenue, and health education is seldom a priority.

One possible source of funding for local public health staff, including community health educators, is the Bangs Disease and Bovine Tuberculosis Fund. In 1971, a survey conducted by the Environmental Health Committee of the Comprehensive Health Planning Council found that these funds are often idle in county treauries. The 1971 survey revealed that disbursements vs. total to be accounted for (fund balance at the beginning of the year plus any receipts for that year) showed little being spent, usually less than $400.00, and in 34 counties no monies in the funds were spent. In contrast to insignificant expenditures, nearly all eighty-five counties showed considerable fund balances at the end of the year, usually $10,000-$20,000.

The State Department of Agriculture has the power to instruct each county how much will be levied each year. This is done on the basis of anticipated or projected expenses in a particular county. As Bangs Disease and Bovine TB near eradication, the use of these taxes has diminished. These zoonotic related tax levying capabilities and other possible sources of funding will be further examined over the next year and subsequent recommentdations included in the 1981 State Health Plan.

In looking at the costs of health care and health education, health care policy makers do not understand, or are not aware that health education can be effective. The legislature and local boards of health have differences in deciding how much of their resources, at least their health dollar resources, should be allocated to prevention. The question most frequently asked of the health education profession is how much should be invested in health education without being absolutely sure that it will pay off? There is increasing evidence that health education succeeds in many circumstances. Health education programs are not, of course, the only way to develop and sustain positive health behaviors. Multiple interventions, improvements in environmental conditions, such as adequate income, and the provision of societal incentives are needed in addition to health education.

Besides the dollar bind of the tax payer, lack of parental and community awareness as to the benefits of school and community health education has kept local school districts and local boards of health from hearing many voices asking for more health education. One probable conclusion of the State Department of Public Instruction Task Force on Comprehensive School Health Education is that, if more comprehensive school education is to be available in Iowa, it needs to come as a result of the call from the constituents of local school districts.

Another major barrier to school and community health education is the lack of trained personnel. Nationally, there is only one health educator trained for every 16,800 persons, and probably even fewer personnel so trained in the

Midwest. Currently, several training programs for physical education/health education exist in Iowa, at Drake, the University of Northern Iowa and at Luther College. Two of the three programs have special physical/health education tracks. One has a masters program in physical education. At least one college in Iowa should offer a masters in health education separate from physical education instruction.

Health care professionals, including school public health nurses, unless certified by state law cannot teach in a school room unless a certified teacher is present. While this state requirement has advantages - only qualified teachers, the temporary certification of such health professionals as school health nurses to each certain health education topics also has advantages. The dearth of certified teachers qualified to teach health education and the possibility of allowing other health professionals to teach in the classroom was considered by the Task Force on Comprehensive School Health Education. The Task Force recommended on this issue that the current law remain intact, while adding the qualifier that any persons teaching a course in health education outside of self-contained classrooms be approved specifically in health education. This recommendation makes further certification and training in health education all the more necessary if health education is to be futhered.

The role of Area Education Agencies (AEAs) in providing continuing education to teachers wishing to become certified to teach health education was also considered by the Task Force for Comprehensive School Health Education. The Task Force concluded that the AEAs "should provide a professionally trained health education coordinator/consultant" to assist local districts in planning inservice programs in order to implement comprehensive health education.

Other Task Force for Comprehensive School Health Education in Iowa proposals centered on needed legislative and Iowa Administrative Code changes, implementation of a model curriculum, and the assumption of new roles by governmental agencies. Proposed legislative and Administrative Code changes center around minor wording changes to separate reference to physical and health education and to add reference to comprehensive health education.

With regard to health teachers, the Task Force's report encouraged colleges and universities to include components on health education in approved elementary teacher programs, and ask the State Advisory Committee on Teacher Education and Certification to adopt a health education componenet in approved elementary teacher education programs in Iowa.

Related to a model curriculum implementation grades K-12, and to the new roles to be assumed by state agencies, the report states that:

- Funds will be sought through Title IV-C and other sources to maintain six models of school health education in Iowa for a minimum of three years by the Department of Public Instruction;
- Local schools will be provided with a local needs assessment instrument, curriculum guidelines, implementation procedures, and evaluation plans;
- Additional sources of monies will be sought to implement innovative health education programs at the state, intermediate, and local levels;
- Resource material will be available as needed from the Department of Public Instruction.

The Task Force's Comprehensive School Health Education Final Report is available through the State Department of Public Instruction, Grimes State Office Building, Des Moines, Iowa 50319.

STATUS GOAL 1: DECREASED RATES OF PREVENTABLE MORTALITY ASSOCIATED THROUGH LIFE-STYLE, ENVIRONMENTAL AND PREVENTIVE HEALTH SERVICE CHANGES.

STATUS GOAL 2: DECREASED RATES OF PREVENTABLE MORTALITY AND MORBIDITY ESPECIALLY ASSOCIATED HIGH SOCIAL DIRECT AND INDIRECT COSTS.

Health Education

School Health Education

SERVICE GOAL 1: INCREASED AVAILABILITY OF HEALTH EDUCATION PROGRAMS IN THE SCHOOL, COMMUNITY, AND HEALTH CARE SERVICES SETTINGS, THAT:

- IMPROVE COMPREHENSION OF HEALTH INFORMATION INCLUDING HEALTH ECONOMICS:
- EMPHASIZE INDIVIDUAL RESPONSIBILITY FOR SOCIAL AND PERSONAL CHANGE IN ORDER TO LIVE HEALTHFULLY

Objective 1: By 1985, the development and utilization of Comprehensive School Health Education curricula for grades K-12 in at least 50% of the 400-500 local public school districts.

LRRA 1: The implementation of recommendations of the Task Force on Comprehensive School Health Education:

- seek Title IV-C funding to implement six model school health education programs in Iowa
- provide schools with needs assessment models
- seek additional funding for comprehensive health education at the local, area, and state levels
- serve as health education clearinghouse for resource material to the schools and school personnel and the AEAs

LRRA 1a: The State Advisory Committee on Teacher Education and Certification consider adoption of a health education component in approved elementary teacher education programs.

SRRA 1: The Department of Public Instruction implement recommendations in the Comprehensive School Health Education Final Report to health education consultants.

SRRA 1a: Three minor changes in the Iowa Code, Chapter 257.25 as recommended in the Comprehensive School Health Education Final Report.

Objective 2: By 1983, creation of at least one program at the baccalaureate and masters level in health education (apart from a physical education/health education program) to provide personnel to carry out the function of school and community health education.

LRRA 2: Office for Health Planning and Deveolpment work with Health Systems Agencies and State agencies to recognize objective 2 as a priority for next planning cycle.

Objective 4: By 1985, establishment of at least 5 ongoing continuing education programs in health education practice for health care professionals and teachers.

LRRA 3: Each AEA provide a professionally trained health education coordinator and/or designated consultant for school health education as recommended in the Comprehensive School Health Education Final Report.

Community Health Education

Objective 4: By 1983, through a statewide committee and/or state staff, coordination of all statewide governmental and voluntary public health promotion activities.

LRRA 4: By 1981, the State Department of Health will fund a community health educator position to help staff the State Department of Health community health education responsibilities.

LRRA 4a: The Iowa Prevention Network or a similar state group will contact governmental and voluntary agencies conducting community health education to:

- inventory present community health education efforts
- encourage agencies' participation in the network
- define gaps and overlaps in statewide health promotion efforts

LRRA 4b: The State Department of Health during 1979-80 will spearhead state planning efforts and apply for a "Health Education-Risk Reduction Project Grant" on behalf of community health education.

Local Public Health Departments

SERVICE GOAL 2: INCREASED REGIONALIZATION OF LOCAL PUBLIC HEALTH SERVICES TO MAXIMIZE ECONOMICS OF SCALE, QUALITY, AND ACCESSIBILITY TO LOCAL PUBLIC HEALTH SERVICE IN IOWA.

Objective 1: By 1985, more district health departments in Iowa.

LRRA 1: By 1982, the State Health Department, Community Health Division, and the Office for Health Planning, with local health departments revise the plan, District Health Departments...Why and How.

The fifteen determinants of preventable health problems which are examined in the remainder of this prevention chapter are organized by the general strategies which are the most salient ways to change them. These are:

Promotion	Protection	Preventive Health Care
Smoking	Hazardous Agents	Pregnancy and Infant Care
Substance Abuse	Occupational Health	Family Planning
Nutrition	Accidents	Sexually Transmissible Disease
Exercise	Infectious Agents	Immunization
Stress	Fluoridation	Hypertension

Smoking Cessation

STATUS

Indicators

- smoking by related disease and death
- cancer rates by smoking related cancer
- % of Iowans smoking by sex by age
- reasons for smoking by age

Smoking related diseases

The Health Consequences of Smoking, DHEW, 1975, identifies smoking as the first ranking public health problem in the United States. Of all the determinants of premature death (Table 1 on page 57 classifies the determinations of premature death into four general categories), the lifestyle factor of cigarette smoking is the single most significant determinant. (1)

Nationally, the rate of death of the population of smokers for all age groups is 70% greater than the rate of death of the population of nonsmokers. (2)

The causal links between: smoking and lung cancer--90% of lung cancer is linked to smoking; smoking and other cancers--breast, mouth, throat, kidney, and bladder; smoking and other lung disease--emphysema, chronic bronchitis and acute respiratory infections; smoking and heart disease--smokers have a 70% greater chance of coronary heart disease than nonsmokers; and smoking and fetal abnormalities--low birth weight, still births, and premature births, are clearly established. Each year in Iowa 30%, or 8,000 of the 27,000 lives lost to heart disease would be saved if all Iowans quit smoking. (3)

Health outcomes associated with reductions in smoking include lessened risk of:

- heart disease;
- artery disease among women taking oral contraception;
- lung cancer, especially for workers already at risk in uranium, asbestos, and cement manufacturing;
- eye irritations to nonsmokers; and
- disability and death from smoking related fires.

Smoking related cancers

In Iowa in 1973-74, incidence rates of cancers which are related to smoking were:

	Per 10,000 Population	% of New Incidences	5 year Survival Rate in 1969 Indigent	Private
Lung	37.7	14.2	8%	14%
Breast	43.3	2.5	37	54
Bladder	14.3	7.3	23	42
Oral Cavity	6.4	13.7	27-58	40-75

Iowans who smoke

Conducted in December of 1978, a survey of Iowans shows that 700,000 adults or

34% of Iowa's population 18 and over smoke. Thirty-two percent of adult men and 28% of adult women smoke cigarettes. Another 1% of women and another 10% of men in Iowa smoke cigars or pipes. In Iowa during 1975, 49% of men and 31% of women smoked. The reduction in smoking among men since 1975 is attributable to electronic media advertising bans, as well as increase dissemination of information on the hazards of smoking. The increase in smoking among women is a result of at least three factors: changing roles for women; increased advertising aimed at women; and, educational efforts being aimed largely at the male population.

Although recent data of Iowa youth is not available, a national study published at Berkeley, California in 1979 shows that more teenagers, especially teenage girls in the United States are smoking, and at younger ages than just 10 years ago. An estimated 15-20% of girls 15-18 years of age smoke, while in 1970 probably less than 10% of girls of that age group smoked. The percentage of boys 12-18 years of age in the United States who smoke has remained more constant over recent years and is slightly higher than the 15-20% of girls of that same age group who smoke. The rate of smoking among youth is very significant as about 50 % of persons who smoke begin before the age of twenty-one.

Reasons for smoking

A Study of Health-Related Awareness and Concerns Among 4th, 5th and 6th Graders was published in April of 1979 and was undertaken in order to develop effective health education programs for youngsters 8-12 years old. In this study, as opposed to youth who said they probably will not smoke, those youth who said that they probably will smoke were more likely to:

- have poor self image;
- focus on outward signs of approval;
- have positive attitude about smoking;
- have tried smoking;
- be of low income families; and
- rationalize the dangers of smoking.

Youth may initially choose to smoke to feel a part of their peer groups, to emulate an admired "leader", to rebel against adult authority, or simply to experiment with an adult habit which advertising makes look attractive.

Another 1979 study conducted by the American Cancer Society shows that adults smoke because of: (4)

- nervous tension - 69% of all smokers
- perceived difficulty of giving up - 77% of all smokers
- disinterest in giving up - 76% of all smokers.

Most adult smokers in Iowa inhale between 1 and 2 packages of cigarettes each day.

SYSTEM

Indicators

- federal policies by enabling legislation by programs by strageies
- state policies by enabling legislation by strategies

Federal Policies

"Public Health Cigarette Act of 1969" - bans electronic advertising, requires labeling and HEW, FTC to report on the effectiveness of these measures to Congress.

Regulatory, economic, and educational strategies

During 1978, federal government initiatives lead by then secretary of DHEW Joseph Califano, created a $23 million Office of Smoking and Health. Strategies which the Office is to consider include:

- encouraging Federal Trade Commission to set maximum levels of tar, nicotene, and carbon dioxide in cigarettes
- increasing to 8 cents per package federal excise tax on high tar/ nicotine cigarettes while exempting low tar/nicotene cigarettes
- banning smoking on airplanes
- strengthening warnings on cigarette packages.

In federally owned buildings, smoking areas are expressly limited by federal rules:

The Office of Smoking and Health and other divisions of the Center for Disease Control will, through competitive grants, release about $10 million for the prevention, through education, of tobacco and substance abuse in FY 1981.

Currently federal policies are inconsistent, discouraging smoking on the one hand, and encouraging tobacco farming (as seen in DOA's subsidies to tobacco growers) on the other.

While health care costs related to smoking induced illness are about $30 billion per year, the federal government spends only $20-30 million on various smoking prevention programs. At the same time, through the Department of Agriculture, the federal government subsidizes farmers to grow tobacco at a rate of $70-80 million each year. Federal policy which would give farmers the $70-80 million to not grow tobacco or to grow another crop would not only result in a more consistent policy on tobacco use, but would save some of the $30 billion in costs that result from smoking.

Objectives for the Nation, (DHEW, 1979), keys on educational, economic and regulatory methods to reduce smoking, including:

- education of youth on psychological factors which promote the onset of smoking
- education of physicians, other health professionals and teachers
- more informative labeling and advertising requirements, increased taxation to provide incentives not to smoke or to smoke lower tar and nicotene cigarettes
- replacement of high tar cigarettes with low tar cigarettes.

Objectives for the Nation specifically suggests the following objectives be accomplished by 1990:

- all cigarette health warning labels improved, tar and nicotene levels and levels of gases to be required
- reduce to below 10 mg. the sales weighted average "tar" content of cigarettes

- reduce concentration of known carcenogens, carbon monoxide, hydrogen cyanide, nitrogen oxide, and actroteen gases in proportion to the reduction in tar content.

State Policies and Programs

Legislation

Chapter 98, "Cigarettes and Tobacco", and 98A, "Smoking Prohibitions", Code of Iowa, 1979, regulate the sale and use of tobacco. These Chapters provide: for penalties for the sale of cigarettes to minors, for the intra-state sale of cigarettes without permits, for placard/billboard advertisement within 400 feet of public schools, and for smoking in certain prohibited public areas among other things. Chapter 98, Code of Iowa, 1979, also sets a 6-7.5 sales tax millage per cigarette sold; depending upon the cigarette's weight this tax amounts to about 1.2-1.5 cents per package.

Chapter 157.25, Code of Iowa, 1979, - requires that physical and health education, "including the effects of alcohol, tobacco, drugs and poisons on the human body," be taught in grades K-12.

Smoking prevention strategies in the state are preventive services, educational, regulatory and economic in nature.

Programs and their strategies preventive service strategies

Preventive services in the form of smoking cessation clinics are numerous, but no statewide inventory of them has been taken. Hospitals, the American Lung Association, the American Cancer Society, community mental health providers, and some employers offer smoking cessation workshops for their employees. Generally such workshops are free, except when offered by a private health worker. More smoking cessation clinics for high risk groups, pregnant women and youth, are needed. Clinics for youth are offered in the state, but an inventory of youth clinics has not been undertaken.

Educational strategies

Educational strategies used in Iowa are: school health education; public service announcements; pamphlet dissemination by public and voluntary health organizations.

A survey conducted by the Department of Public Instruction in 1979 of Grades K-12 allowed that somewhere between 48 and 60% offer school health education two hours a month or less, and that substance abuse education is emphasized in only 20% of the 447 school districts. Although Chapter 257 of the Code of Iowa, 1979, requires substance abuse, including tobacco, health education in Iowa schools, the quality of that education apparently varies widely. (Other health topics emphasized by the 447 school districts are: 64% - personal health; 45% - nutrition; 33% - safety and first aid; and 22% - family life/sex education.)

With the vast majority of smokers choosing to begin to smoke before age 21, teaching and learning which effects youth to choose not to smoke are of primary importance, and beg for more emphasis in Iowa schools.

While curricula are readily available to these school districts (the Iowa Division of the American Cancer Society has made available to 80% of the local

school districts in Iowa a curriculum, "An Early Start to Good Health", for K-3 which emphasizes positive health habits, and has offered through the Area Education Agencies a curriculum, "Health Network", for grades 4-6; other states and volunteer agencies have health curricula also available to local districts), the problems related to the lack of health education appear to be ones of community support, staff training, and time.

In recent years, public information campaigns, smoking cessation clinics, and bans on air wave advertising have decreased smoking among adult men. However, more youth are choosing to smoke than in 1970, especially teenage girls (who, if they are pregnant place their infants at risk). Evaluation of school health education efforts show that alone information dissemination about smoking and other abused substance will not discourage abuse, and in fact, may lead to increased experimentation. However, classes that emphasize values clarification, positive self images, and decision making skills lead to fewer youth abusing substances.

Regulatory and economic strategies

Regulatory strategies in Iowa (and elsewhere) such as banning the sale of cigarettes to minors appears to be an inadequate strategy in and of itself. While it does have some deterent influence, whether it can be made more effective through stricter enforcement is unknown. The stricter enforcement and State Department rule making authority to enforce Chapter 98A, Code of Iowa, 1979, which bans smoking in certain public areas is proposed in a file before the 68th General Assembly. Evaluation of the effective enforcement of Chapter 98A which was made law in early 1979 has not been made. However, general support (66% of Iowans, Iowa Poll, January 1979) for Chapter 98A exists, and most public places appear to be complying with the law. Chapter 98A seeks mainly to protect the rights of nonnsmokers.

Other state regulatory and economic strategies with some state or federal support to prevent smoking include:

- banning at the national and state levels all cigarette advertising, especially of high tar/nicotene cigarettes;
- disallowance as a legitimate business expense for income taxes, cigarette advertising;
- appeals to the federal government to change agricultural subsidies to tobacco farmers to subsidies to not grow tobacco or to grow other agricultural products;
- increment of the present sales tax millage from .06-.075 per cigarette to some higher amount. (Since low income groups, including youth, are more likely to smoke, higher taxes could reduce use among these populations.)

STATUS GOAL 3: DECREASED CIGARETTE SMOKING AMONG IOWA'S POPULATION.

SERVICE GOAL 3: INCREASED REGULATORY, ECONOMIC, PREVENTIVE SERVICE AND EDUCATIONAL PROGRAMS/STRATEGIES IN ORDER TO DECREASE SMOKING.

Objective 1: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report. See actions on page 69.

Objective 2: By 1985, change in Federal/State income tax laws such that cigarette advertising is no longer a tax deductible expense.

Objective 3: By 1985, state program to coordinate inventory of current smoking prevention programs in the state.

Objective 4: By 1985, increase to an average of at least one smoking cessation workshop in each high school in Iowa annually.

Objective 5: By 1985, increase present sales tax on high tar/nicotene cigarettes from 6-7.5 mills to 8-9.5 .

Objective 6: By 1985, local law enforcement agencies more severely enforcing Chapter 98 and 98A, Code of Iowa, 1979.

References for Smoking

1. Healthy People, DHEW, PHS, 1979, p. 121.

2. Objectives for the Nation, DHEW, PHS, p. 77.

3. Healthy People, DHEW, PHS, p. 122.

4. A Basic Study of Public Attitudes Toward Cancer and Cancer Tests, Leberman Research Inc., 1979, p. 18.

Other References

Audience Goals and Program Priorities Public Education 1979-80, American Cancer Society.

A Survey of Iowa Opinions and Attitudes, 1975, American Lung Association of Iowa, Des Moines, 1975, pp. 30-52.

Substance Abuse

STATUS

Indicators

- substances by kind by most abused/used substance by effects
- alcohol abuse by age by amount abused
- alcohol abuse by reasons for abuse
- substance abused by related morbidity and mortality

Alcohol, prescription drugs, and marijuana are the most used substances in Iowa. While mind altering substance use in moderation may present no hazard to our health, substance abuse does. Substance abuse is the use of any substance for other than its intended purpose or in quantities greater than the established therapeutic level. All drugs can produce devastating effects if used improperly. The extent of these effects will vary from drug to drug and from person to person. (Of growing concern is the poly-drug abuser, a person who concurrently uses more than one substance.) Drugs which are most often abused generally fall into one of four categories:

Drug Most Used	Characteristics/Physical Effects/Symptoms
Central nervous system stimulants (amphetemines, nicotene, caffeine)	Weight loss, hypertension, diarrhea, pinpoint pupils, dependency
Central nervous system depressants (alcohol, barbituates)	Coma, calming, dependency, addiction
Analgesics (narcotics)	Dependency, addiction
Hallucinogens (LSD, angel dust)	Addiction, altered psychological perceptions

Alcohol abuse

Alcocol is the most abused mind altering substance, regardless of age. For Iowans, accidents, arrests, substance dependence among clients in the four mental health institutes, and deaths related to alcohol exceed those of any other mind altering drug. (1)

Interpolated from a national Harris Opinion Poll (1972-74), an estimated 68% (1,423,000 in 1980) of Iowans 18 and over drink alcohol occasionally. About 8% or 77,400 Iowans of that same adult population abuse alcohol (drink on an average at least 1 ounce of absolute alcohol per day) or are alcoholics (drink to the extent alcohol interferes with fulfillment of work or other personal responsibilities). (2)

In 1978, a Department of Public Instruction (DPI) survey of Iowa youth in grades 6-12 found that 28% or 79,500 of these 284,000 youth drink regularly (once a week) or heavily (three times a week or more). National estimates are that 20-25% of youth 14-17 years of age abuse alcohol.(3) (As defined in the particular national study, abuse means being intoxicated at least once a month.) Iowa projections, based on this national study are that between 40-50,000 Iowa youth 14-15 years of age are intoxicated at least once a month.

While the comparison of DPI to national data does not show young Iowans' drinking habits much different from other young Americans, overall, Iowans have the sixth lowest consumption per capita when compared to the other 50 states.

Abuser characteristics

The alcohol abuser is more likely to be male (__%); low income (__%) and white (__%).

When asked why they abuse alcohol, people are likely to give the following reasons: (information not yet detailed)

Fetal alcohol syndrome

Women are responsible for much of the 30% increase in the United States in alcohol use over the past 15 years among adults 18 and over. In the past several years, researchers have conducted a number of studies of infants born to women who drink heavily (3 or more ounces of absolute alcohol daily). A significant number of infants studied are born with physical, mental, and behavioral abnormalities, which researchers named "fetal alcohol syndrome". These babies are shorter, lighter and do not catch up even after special post-natal care. They have abnormally small heads, severe facial irregularities, joint and limb abnormalitis, heart defects and poor coordination (5) The number of babies born each year in Iowa with fetal alcohol syndrome is estimated to be nine, or one in every five thousand births. For every 100 women who drink more than one ounce of alcohol daily during pregnancy, one child is born with an alcohol-induced birth defect. (6) In one study of fetal alcohol syndrome, thirty two percent of the infants of heavy drinkers had birth defects while only 9% of the infants of nondrinking mothers had such defects.

Alcohol related deaths and illness

An HEW departmental report, Disease Prevention and Health Promotion, describes the consequences of alcohol abuse as profound. In Iowa and nationally, alcohol is the principal factor associated with two of ten leading causes of premature (before age 75 death)--cirrhosis of the liver and accidents. Alcohol abuse is associated with cancer of the liver, esophagus and mouth. Primary liver cancer is almost exclusively attributable to alcohol abuse. Persons who smoke cigarettes and drink are particularly susceptive to esophagal cancer. Gastroenteritis, vitamin and other nutrient malabsorption problems are common among alcohol abusers. (7)

During 1977 in Iowa, 266 Iowans, (about 9.7 per 100,000 Iowans) died of cirrhosis of the liver, due mainly to chronic alcoholism. Two hundred and twenty-three of those who died were less than 75 years of age. The Iowa Department of Substance Abuse estimated for that same year that of the 330 persons whose primary cause of death was acute/chronic substance abuse 191 of these deaths were attributable to alcohol abuse.

By law, a driver involved in an accident is not required to submit to an alcohol test unless intoxication is thought to be the "probable cause" by the investigating officer. Therefore, yearly reporting of alcohol related to accidents fluctuates and comparison to states where a driver is required to take an

alcohol test is difficult. In 1978, 36% of the 570 motor vehicle caused deaths in Iowa were alcohol related--down from a reported 39% in 1977. Of the 21,651 motor vehicle injuries in 1978 15% or 3,266 at minimum were alcohol related. Both DOT and Highway Safety Program Staff agree that this 15% represents gross underreporting.

Young drivers have disproportionally high involvement in alcohol-related accidents when compared to the general population of all licensed drivers. During 1978, 9% of drivers involved in fatal accidents were 20 or younger, while this same age group comprised 13% of all licensed drivers. Twenty-one to twenty-four-year olds accounted for 24% of all fatal accidents in 1978 and only 11% of all licensed drivers. (8)

Other substance abuse

Prescription drugs follow alco hol as the next most widely used mind altering substance. Thirty-one percent of Iowans use prescription drugs. Iowans 65 years of age and over purchase 75% of all prescription drugs, and are therefore a population at high risk of misusing drugs. Amphetamines, which are used for weight loss and which aggravate tendency toward hypertension and are physically addictive, are the prescription drugs most abused. National studies indicate that unemployed women, the low income, and less educated are at highest risk of abusing prescription drugs. (9)

In addition to alcohol and amphetamines, the Iowa Comprehensive Plan for Substance Abuse, 1978-79, identifies marijuana as a high use drug in Iowa, especially among the young. Psychological rather than physical addiction results from marijuana abuse.

Abuser characteristics

A profile of the substance abuser in Iowa shows that 68% are male, 88% are between 18 and 34 years of age, 80% are white, and 64% are single.

Healthy People, the Surgeon General's Report on Health Promotion and Disease shows that anxiety and low self esteem increase the likelihood of one's using mind altering drugs. The young, unemployed, and the low income are at risk to the extent that they perceive themselves as responsible for their low social status. Other factors which tender the relationship between low socioeconomic status and substance abuse include familial support, parental relationships (children tend to model parents if they like them, and if they feel alienated will adopt contrary habits) and peer modeling. (10)

SYSTEMS

Indicators

- Federal polices by enabling programs by barriers addressed
- State policies by enabling legislation by barriers addressed

Federal Policies

Regulatory strategies have been the primary national tool of drug abuse prevention this century. While not being sufficient in and of themselves, drug laws and their enforcement have had an impact on drug use to the extent that they limit availability. (11)

National Highway Safety Program, Department of Transportation, and the National Alcoholism Treatment Network, DHEW, Alcoholism, Drug Abuse and Mental Health Administration - these programs support various substance abuse prevention and treatment programs for states.

Bureau of Alcohol, Tobacco and Firearms - Teasury Department - requires content labeling of products containing alcohol.

Regulatory and educational strategies

Objectives for the Nation sets only health status, not health service, objectives for substance abuse. However, measures recommended to overcome barriers to better health include:

- Regulatory strategies, which have proved effective and, therefore, ought to continue
- Mass media and awareness campaigns, especially counter--advertising, since they offer powerful prevention tools
- The learning of coping and values clarification skills
- Continuation of Dram Shop laws which make persons who sell liquor to an intoxicated person responsible for injury done by that intoxicated person

Disease Prevention and Health Promotion - recommends labeling of alcoholic beverages to notify users, in addition to alcoholic content, of:

- dependency
- risk if used while operating machinery
- health hazards for women during pregnancy

In regard to the effectiveness of education and service strategies "the best approaches to given management (of drug abuse to) provide flexible philosophies to help a person endure unrewarding circumstances...For maximum social adjustment a person may need opportunities to develop competence...But opportunities must be real and should lead eventually toward access to material benefits and experiences that free a person from a sense of deprivation that make mind altering drugs attractive." (12)

State Policies and Programs

Legislation

Chapter 257.25, Code of Iowa, 1979, requires that physical and health education, "including the effects of alcohol, tobacco, drugs and poisons be taught in grades K-12."

Chapter 123, Code of Iowa, 1979, the Iowa Beer and Liquor Control Act, among other things:

- Gives state monopoly to alcoholic liquor imported into Iowa
- Prohibits private sale or distillation of liquor without a permit or license
- Forbids Sunday liquor sales in establishments whose revenues are not at least 50% non liquor
- Makes illegal giving alcoholic drinks to minors except in private house with parental consent

- Bans alcoholic advertisement except as permitted by federal law and state regulations
- Places special tax of 15% on holders of retail liquor licenses
- Gives injured persons the right to sue
- Sets the liability for any licensee who sells liquor to an intoxicated person who injures another person while intoxicated

Chapter 125, Code of Iowa, 1979, "Chemical Substance Abuse" - sets up a Commission and State Department of Substance Abuse. This Chapter declares the three policies related to Substance Abuse. One of these policies is "To encourage substance abuse education and prevention efforts and to ensure that such efforts are coordinated to provide a high quality of services without unnecessary duplication". The Chapter requires the Department of Substance Abuse to set up regional treatment facilities whose programs "shall include...prevention and education".

Chapter 321.285, Code of Iowa, 1979, "Motor Vehicles and Law or Road" - allows courts to sentence persons convicted of operating a motor vehicle while under the influence, in addition to or in lieu of another punishment, to attend a course for drinking drivers.

Programs and their strategies

Educational

While state policy is that substance abuse preventive services exist throughout the state, the scope of prevention and intervention programs varies widely. Currently, statewide coverage is not complete, although nonsubstance abuse specific programs (i.e., youth services bureaus, mental health centers, youth groups, religious service providers and special delinquency prevention programs) are available to some degree in all regions. Identification of prevention and intervention programs operating throughout the state has taken a step forward through the formation of the "Iowa Prevention Network".

The IDSA state prevention coordinaion project, which formed the Iowa Prevention Network, was implemented in fiscal year 1979 to address technical assistance coordination and development of certification standards, evaluation mechanism and a data information system to enhance future prevention planning. Continued emphasis on statewide prevention activities in the areas of substance abuse curriculum, teacher training and peer helper training school teams will be carried out through the Department of Public Instruction's Substance Abuse Prevention Education Project.

Both the Department of Public Instruction and the Department of Substance Abuse have the authority to provide substance abuse education. While the two agencies are working together on the SAPE Project, in general, a stronger working link between the two agencies can result in Iowans receiving more comprehensive and effective substance abuse prevention programs. As stated in the smoking section (page 74) only 48-68% of local school districts offer health education more than two hours a month; substance abuse education is emphasized in only 20% of those school districts offering health education. With the high rate of alcohol abuse and motor vehicle accidents attributable to alcohol among teenagers, effective preventive programs for youth and interagency coordination are vital.

Regulation

Federal studies show that regulatory strategies to contain substance abuse, such

as those that limit the hours of sales, sales to minors and the dram shop laws, but especially those that impact the cost, are effective. The fact that per capita of alcohol consumption in Iowa is the sixth lowest when compared to other states is probably attributable in some large measure to the state monopoly and regulation of liquor and beer.

Legislators of the 68th General Assembly have on file somewhere between 20 and 36 proposals which affect the Beer and Liquor Control Act and the Criminal Code of Iowa with regard to intoxication. Many files increase the intent to deter substance abuse (increased sales tax on alcohol, elimination of deferred sentences and judgments for OMVUI, creation of minimum fines for OMVUI convictions), while others weaken regulation and, therefore, the Code's intent to deter (doing away with 15% sales tax of liquor licenses, the repealing of the ban to advertise near schools). Since the cost of liquor has been substantiated to be a deterrent to abuse, legislation which decreases costs will probably result in increased abuse.

Another regulatory strategy which the Commission on Substance Abuse has endorsed is the creation of a special Substance Abuse Rehabilitation or Prevention Fund through the enactment of an additional 2% retail sales tax on liquor sold in Iowa stores.

In addition to increased sales tax, effective economic strategies to present substance abuse in the state are the ban of income tax deductions for alcohol advertising as a legitimate business expense, and the adjusting of insurance premiums to reflect drinking and other drug use.

STATUS GOALS 4: DECREASED MIND-ALTERING SUBSTANCE ABUSE AMONG IOWANS, PARTICULARLY ALCOHOL ABUSE, AND PARTICULARLY AMONG THOSE POPULATIONS - YOUTH, LOW INCOME AND UNEMPLOYED - AT RISK.

SERVICE GOALS 4: INCREASED AVAILABIILITY OF SUBSTANCE ABUSE PREVENTION (EDUCATIONAL, ECONOMIC, REGULATION AND PROGRAMMATIC) STRATEGIES IN ORDER TO DECREASE SUBSTANCE ABUSE AMONG AT RISK POPULATIONS.

Objective 1: By 1985, increased availability of services for drug abuse prevention through an increased sales tax on liquor sold in Iowa liquor stores from 3% to 5%, and a special dollar barrel tax on beer.

LRRA 1: State legislature enact SF 156 which increases sales tax for the purchase of alcoholic beverages and barrel beer as specified in Objective 1.

Objective 2: By 1985, elimination of ability to allow deferred sentences for OMVUI.

LRRA 1: State legislature to enact HF 49 which eliminates deferred sentences for OMVUI. Section 321.281 states that OVMUI's first offense requires a two day prison sentence. But this requirement may be deferred by Chapter 907. SF 2061 would allow deferred sentences, but add fines to the required prison sentences for OMVUI.

Objective 3: By 1985, a better system of counting the number of drivers who, while under the influence of alcohol, are involved in accidents of personal injury.

Objective 3: By 1985, a better system of counting the number of drivers who, while under the influence of alcohol, are involved in accidents of personal injury.

LRRA 1: Iowa Department of Substance Abuse and Health, and the Highway Safety Program study and seek necessary Code changes to attain better count of such alcohol related injuries.

Objective 4: By 1985, state and federal income tax deductions for alcohol advertising be disallowed.

LRRA 1: Iowa Departments of Substance Abuse and Health will contact state and federal revenue officials to discover necessary steps to carry out objective.

Objective 5: By 1985, special health and life insurance rates required for group policies whose memebers practice substantially healthy habits.

LRRA 1: Iowa State Department of Health will contact Insurance Commission officials to determine extent such rates are now available in Iowa.

Objective 6: By 1985, at least 25%, or 110, of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report to the Department of Public Instruction.

LRRA 1: Enactment of the seven recommendations of the Task Force Report.

References - Substance Abuse

1. Iowa Comprehensive Plan for Substance Abuse, 1978-79, pp. 18-21.

2. Ibid., p 38.

3 Healthy People, PHS, DHEW, 1979, p. 125.

4.

5. "Alcohol and Your Unborn Baby", NIAAA, HEW, p. 4.

6. Disease Prevention and Health Promotion, PHS, DHEW, 1978 pp. 45-46.

7. Healthy People, PHS, DHEW, 1979, p. 29.

8. Highway Safety Plan 1980, Office for Planning and Programming, Des Moines, Iowa, pp. 35-43.

9. Healthy People, The Surgeon General's Report on Health Promotion and Disease Prevention Background Papers, PHS, DHEW, 1979, pp. 202-204.

10. Ibid., pp. 202-204.

11. Ibid., p. 204.

12. Ibid., p. 316.

Nutrition

STATUS

Indicators

- overnourishment by kind, by sex, by age eating behaviors
- overnourishment by kind, by health outcome

For most Iowans, overnutrition rather than undernutrition is the major diet related health problem.

The first Health and Nutrition Survey (1971-72) of the National Center for Health Statistics reveals that less than 1% of Americans are undernourished.

Exceptions to this generalization of adequate nutrition are iron deficiencies among pregnant women and young children, and a trend toward low calorie intake in women 60 years of age and over. (1)

Of Iowans, a broad based nutrition survey has not been undertaken, (although for specific nutrients and subpopulations information has been collected) so general inferences about Iowans must be drawn from national data.

Calorie intake high

Many Americans ingest too many calories. Thirty-five percent of women 45-64 years of age with low incomes and 29% of those with middle or upper incomes are obese. (Obesity is defined as being greater than 10% of ideal body weight for their size and sex). American men of low income (5%) and of middle to upper income (15%) are also obese. Obesity in adults is asociated with diabetes, gall bladder disease, high blood pressure, heart disease, arthritis and social stigmatization. A majority of hypertensive adults are obese. (2) Obese children are three times more likely to be obese audlts, and so are at risk of developing obesity related illnesses as adults.

Fat and salt ingestion excessive

In overnourishing themselves, Americans ingest too much saturated fat, cholesterol, and salt. Fat rich, high sodium diets are associated with arteriosclerosis, heart disease and hypertension. Americans who do eat less saturated fats have been demonstrated to have less heart disease than the general population. (3)

Other studies of Americans suggest that high animal, low fiber consumption is linked to colon cancer. (4)

Teens: high fat, and sugar, and milk consumption

A 1965 study(4)of teenagers in Iowa concluded that:

- the average teenager is well nourished
- a significant minority had physical lesions (gum disease, selorrhea) and biochemical abnormality (high cholesterol and triglicerides, and riboflavin ercretion)
- dairy product consumption was very high
- consumption of sugar was very high

A 1968 (5) study of children seen at rural amublatory health clinics in Iowa found that:

- 22% were shorter than expected height; 33% were above expected height or their age groups
- 20% were below expected weight; 13% were above expected weight for their age group and height; and
- 10% had low hemoglobin levels

Healthy People states that given what is already known or stongly suspected about the relationship between diet and disease, Americans would probably be healthier ... if they consumed:

- calories sufficient only to maintain desirable weight;
- less salt;
- less sugar;
- more complex carbohydrates -- whole grains, cereals, fruits; and
- more fish, poultry and legumes and less red meat

Over half of the average American diet is of processed foods in which trace elements of cetain essential nutrients are lost in preparation.

Deficiencies among pregnant women and children

Nutrient deficient diets are most common among pregnant and lactating women and young children low income children and pregnant and lactating women are expecially likely to have inadequate diets. The children of low income and teenage mothers are 2.5 times more likely than the children born to mothers who are between 20 and 35 years of age to hve brain and nervous defects. "Research during pregnanay may result in the baby being mentally retarded. Other problems attributable to inadequate nutrition (during pregnancy) are: low birth weight, retarded fetal growth, obesity, iron deficiency and dental caries." (6)

Fifty percent of all nervous and brain defects are preventable. Adequate nutrition for these at risk children, through an increase in the percentage of women who breast feed and an increase in the access to nutritious food of low income, can eliminate much of this preventable mental retardation.

SYSTEM

Indicators

- federal policies by statements of policy by program barriers addressed
- state policies by enabling legislation by barriers addressed

Federal Policies

Federal policies which affect nutrition are many and contradictory. Dietary Goals for the United States was published in 1977 by the Senate Select Committee on Nutrition and Human Need. These goals were not adopted in legislation or endorsed by the President, mainly because of the widespread controversy surrounding them. Achievement of these goals requires major changes in Americans' diets -- and so the food industry. Opposition to the goals center on the lack

of research to substantiate that the predicted degree of improved health would in fact result if the dietary goals were achieved.

The goals are: (1) Increased carbohydrate consumption to account for 55-60% of caloric intake; (2) Reduce overall fat consumption from approximately 40 to 10% of caloric intake; (3) Reduce saturated fat consmption to about 10% of caloric intake; (4) Reduce cholesterol to about 300 mg a day; (5) Reduce sugar consumption by about 40%; and (6) Reduce salt consumption by 50-80% to 3 gms a day.

In place of these goals, in early 1980, the Departments of Agriculture and Health, Education and Welfare introduced a seven point consumer guide, "Nutrition and Your Health", to encourage Americans to eat a greater variety of foods including less fat, sugar, salt and alcohol, and sufficient starch and fiber. The Department of Agriculture has begun to use these guidelines to buy and prepare food which is lower in salt, saturated fat and sugar for the school lunch program. The Departments of Agriculture and Health, Education and Welfare can apply these guidelines to change other food production and supply programs to decrease the level of salt, sugar, and saturated fat in foods available to the general population. Doing so begins to eliminate some of the inconsistencies between current federal policies, some of which seek to improve the well-being of people through improved nutrition while others purpose to boost food production and protect the agricultural production with only minimal regard for the impact on the diet of Americans. These guidelines are:

- eat a variety of foods
- maintain ideal weight
- avoid too much fat, saturated fat, and cholesterol
- eat food with adequate starch and fiber
- avoid too much sugar
- avoid too much sodium
- if you drink, do so in moderation

The Department of Health, Education and Welfare clearly recognizes that nutrition is one of the factors determining health status. The Department has adopted the following goals to be accomplished over the next five years for Maternal and Child Health:

- reduce by 25% infants with birth weights of less than 2,500 grams
- reduce level of MR and physical growth retardation in the low income groups
- reduce to 5% or less prevalence of obesity among children
- decrease iron deficiencies by 25%
- decrease by 3% coronary death rate
- reduce dental carries
- reduce obesity and so risk of diabetes
- maintain and improve the general nutritional quality of food
- increase to 50% the proportion of infants who are breastfed the first three months of life

Federally funded nutrition programs and education efforts include the:

- Center for Disease Control's model School Health Curriculum;
- Health Services Administation's Maternal and Child Health Program, including the Women's, Infant's and Children's supplemental food program;

- Center for Disease Control Diabetes Project
- Head Start's and Title XX Day Care nutrition education program;
- Administration on Aging's congregate meal programs;
- Federal Food Stamp Program and
- various diet related research

Published by the Department of Health, Education and Welfare, Disease Prevention and Health Promotion, and Objectives for the Nation identifies the need to accomplish by 1990:

- increased public awareness of relationship between diet and health by 50% and use of reliable nutrition information in making food choices by 25% to accomplish reduction in: obesity, heart disease, dental caries, cancer and poor health among pregnant women and infants
- an increase of 100% in programs to prevent obesity in primary schools
- eliminate one of restricted access to food which results in infant and child growth retardation
- labeling of foods so that consumers can select a diet with their preferred intake of salt per day

Strategies to accomplish these objectives suggested in Objectives for the Nation include:

Educational Measures:
- larger role for health professionals in providing nutrition education
- comprehensive school health education
- expansion of public and private efforts to make public more aware about diet and chronic disease

Technological Measures:
- leaner meat production,
- fortifying certain food stuffs,
- producing products lower in fat, salt, saturated fat and cholesterol,
- adequate labeling and positioning stocked food so that nutritional content is readily apparent
- national nutritional surveillance and monitoring system
- increased reseach into the role of chronic disease and diet

Legislative and Economic Measures:
- HEW recommendations on diet based on a set of dietary guidelines
- food labeling legislation with regard to salt
- adjusting insurance premiums to reflect relative risks of group
- government food purchasing support programs continued

Objectives for the Nation identifies education and economic strategies as being most effective.

State Policies and Programs

Legislation

Chapters of the Code of Iowa related to diet and nutrition include:

Chapter 178, State Dairy Assoication -- sets up staff and commission to promote the dairy industry.

Chapter 179, Dairy Industry Commission -- sets up staff and commission to disseminate information on (among other things):

- the importance of dairy products in improving public health
- the harmful effects on public health which would result if dairy industry were broken down
- the possibilities of increasing consumption of dairy products

Chapter 181, Beef Cattle Producers Association -- sets up employees and commission to aid in the promotion of beef.

Chapter 183, Swine Producers Association -- sets up commission and staff to promote the welfare of the swine industry.

Chapter 184, Poultry Association -- sets up funds for poultry associations throughout the state.

Chapter 185, Soybean Promotion Board; Chapter 185A, Iowa Soybean Association; Chapter 185B, Corn Growers Association; Chapter 185C, Corn Promotion Board -- also establish state support for their representative industries.

Chapter 190A, Frozen Desserts -- sets content, labeling and false advertising requirements for artificial ice cream products.

Title X, Regulation and Inspection of Foods, Drugs and Other Articles

Chapter 191, Labeling Foods and Chapter 189, General Provisions -- establish minimum label requirements for wrapped and packaged food.

Chapter 191A, Food and Beverage Vending Machines -- Provides for licensing of vending machine operators if perishable foods are sold.

Chapter 196A and 184A -- establish excise taxes on turkey and egg sales, if producers so vote to fund industrial promotion commission.

Chapter 257, Department of Public Instruction -- requires that health education be taught in grades 1-12.

State agencies with nutrition and diet related responsibilities include:

Programs and their strategies

Department of Public Instruction directs the school lunch program for the state and provides guidance on layout and equipment for new and remodeled food preparation facilities in the schools. They also provide some training and guidance for those day care centers that receive commodities. I believe some schools provide meals for the Title VII (Congregate Meals) Program.

In November, 1977, Congress amended the Child Nutrition Act of 1966 to encourage effective nutrition education to children participating in the federally assisted child nutrition programs. In passing this amendment, Congress established grants to States to develop comprehensive nutrition education and training programs.

Specific groups to be included in the NETP are:

1. All children in schools and institutions eligible to participate in the Child Nutrition Programs.

2. Teachers who will be giving nutrition education.
3. School food service personnel in nutrition education and management training.
4. Development of media for use with children in schools and institutions in teaching nutrition.

In Iowa the funds of the grant were made available to all schools and institutions in the state for the development of nutrition education pilot projects. The centers were given an opportunity to submit a plan and a budget for the project for approval by the State office. Fifty-six public schools, four non-public schools and thirty-four child care centers submitted projects for the 1978-79 school year. This means that special nutrition projects took place in about two hundred sites in the state, reaching approximately 38,000 children.

Department of Social Services directs and provides consultation to the food service departments in mental health and penal institutions in Iowa. They have been involved with providing educational programs for some county homes.

Commission on Aging implements the Title VII (Congregrate Meals) Program.

Extension Service provide nutrition education to the general public, to some Congregrate Meals Programs and to some day care centers.

Department of Health provides information on nutrition to public health and school nurses. Some guidance is provided to Mobile Meal program leaders, and a small number of day care centers. Some training is provided to a few Homemaker Home-Health Aides in Iowa.

The Nutrition Component of Maternal and Child Health Section provides nutrition education for the M & I project at Ottumwa, and are starting to provide the C & Y project in Davenport.

The Nutrition Section provides nutrition education and training to food service employees in health care and residential care facilities; consultation to dietary consultants and administrators, architects and contractors. Staff works with Iowa State University and the Department of Social Services to implement three one-week-long short courses each year, for food service employees in health care facilities.

Department of Agriculture

No one state department provides nutrition education and training for food service employees who work with day care centers, Mobile Meals programs, or nutrition education for Homemaker Home-Health Aides.

Staff of the Health Facilities Division suggested several years ago: The establishment of an Inter-Agency Council on nutrition in order to; determine exact need, set of objectives; determine groups which could have stronger input toward meeting these needs; and oversee implementation of identified needs.

STATUS GOAL 5: INCREASED NUMBER OF IOWANS WHO ARE OF THE IDEAL WEIGHT AND WHO ACHIEVE IDEAL BLOOD CHOLESTEROL LEVELS.

SERVICE GOAL 5: THROUGH EDUCATION, FOOD SUPPLEMENTS AND TECHNOLOGICAL MEASURES, LOWER THE NUMBER OF IOWANS WHO ARE OVERNOURISHED, AND DECREASE THE NUMBER OF IOWANS WHO ARE UNDERNOURISHED.

Objective 1: By 1985, food labeling legislation for the nation and for Iowa that requires the amount of salt, sugar, fat and saturated fat and calories on all packaged and processed food.

LRRA 1: ISDH support federal and state legislation to require such labeling on such processed food.

Objective 2: By 1985, assessment of proposal charges in state policies toward food production and processing in order to and consumers in choosing diets with less salts, saturated fats and sugars.

LRRA 1: Establish ment of a nutrition inter-agency coordinating council to oversee and improve effectiveness of state level activities related to nutrition and develop an assessment of state nutrition policies.

Objective 3: By 1985, same as other comprehensive health education objectives.

See page 69 for actions.

Objective 4: By 1985, all government funded meal programs in Iowa using the nutrition guidelines in "Nutrition and Your Health".

SRRA 1: Disseminate guidelines to all programs in Iowa.

LRRA 1: Each state agency sponsor with funded meal programs providing consultation to those programs to explain how to use guideline.

References - Nutrition

1. Healthy People, PHS, DHEW, 1979, p. 129.

2. Paul Oglesty, "The Prevention of Cardiovascular Disease," Healthy People, The Surgeon General's Report on Health Promotion and Disease Prevention Background Papers, PHS, DHEW, 1979, p. 177-178.

3. Ibid, p. 178-179.

4. "Nutritional Status of Teenagers in Iowa, Hodges, R., and Krehl, W.A., "American Journal of Clinical Nutrition, vol. 17, October 1965, pp. 200-209.

5. A Study of the Health of Iowa's Children and Youth, American Academy of Pediatics, 1979, p. iv-10.

6. Health Systems Plan 1979-1984, Iowa Health Systems Agency, Des Moines, Iowa, 1979, p. 14.

7. Cavins, John, :Cancer: The Case For Preventive Strategies," Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention, PHS, DHEW, p. 166-167.

Exercise

STATUS

Indicators

- exercise by reduced health risks
- exercise rates by populations

Health effects of exercising

When compared to non-exercisers, people who regularly exercise 15-30 minutes at least 3 times a week have: a two and one-half times lower risk of having cardiovascular disease, which is the leading cause of premature death. In Iowa in 1977, about half of all people who died had circulat ry disease as their primary cause of death and, a 2-2.25 lower risk of sudden death. Exercisers report they have more energy and require less sleep; greater muscle strength and flexibility; decreased anxiety, and greater self-esteem. Regular exercise also has the psychological benefits of relief from mild depression.

Many persons who begin to exercise regularly also adopt other healthy behaviors such as eating more nutritiously, abandoning smoking and alcohol abuse. Exercise is asociated with lower blood cholesterol, higher level of high density lipoproteins (associated with lower risk of heart attacks) and lowered blood pressure. (1)

Populations which exercisers

Iowa specific estimates on the number of people who exercise are not known. However, less than 50% of the adult population of the United States say they regularly exercise (Gallup Poll-1977). Five percent of Americans over 20 years of age run. (2) Groups which exercise even less than the rest of the population are girls, women, elderly, low-income, rural, and inner city residents.

For the most part, people in the United States have become increasingly sedentary through the century, both youth and adults.

Over 80% of people in the United States who visit their physicians can't remember when they last exercised. (3)

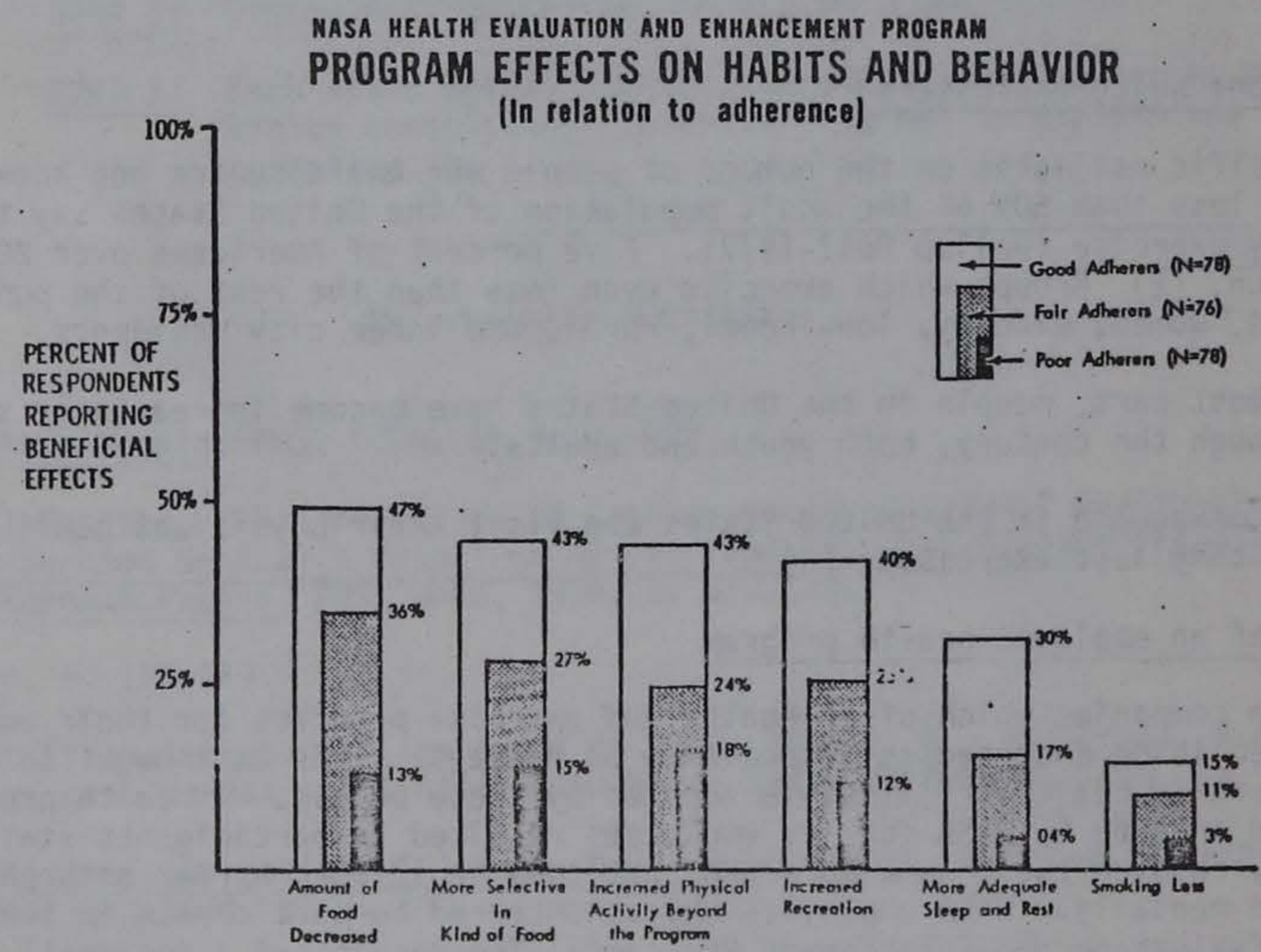
Results of an employee health program

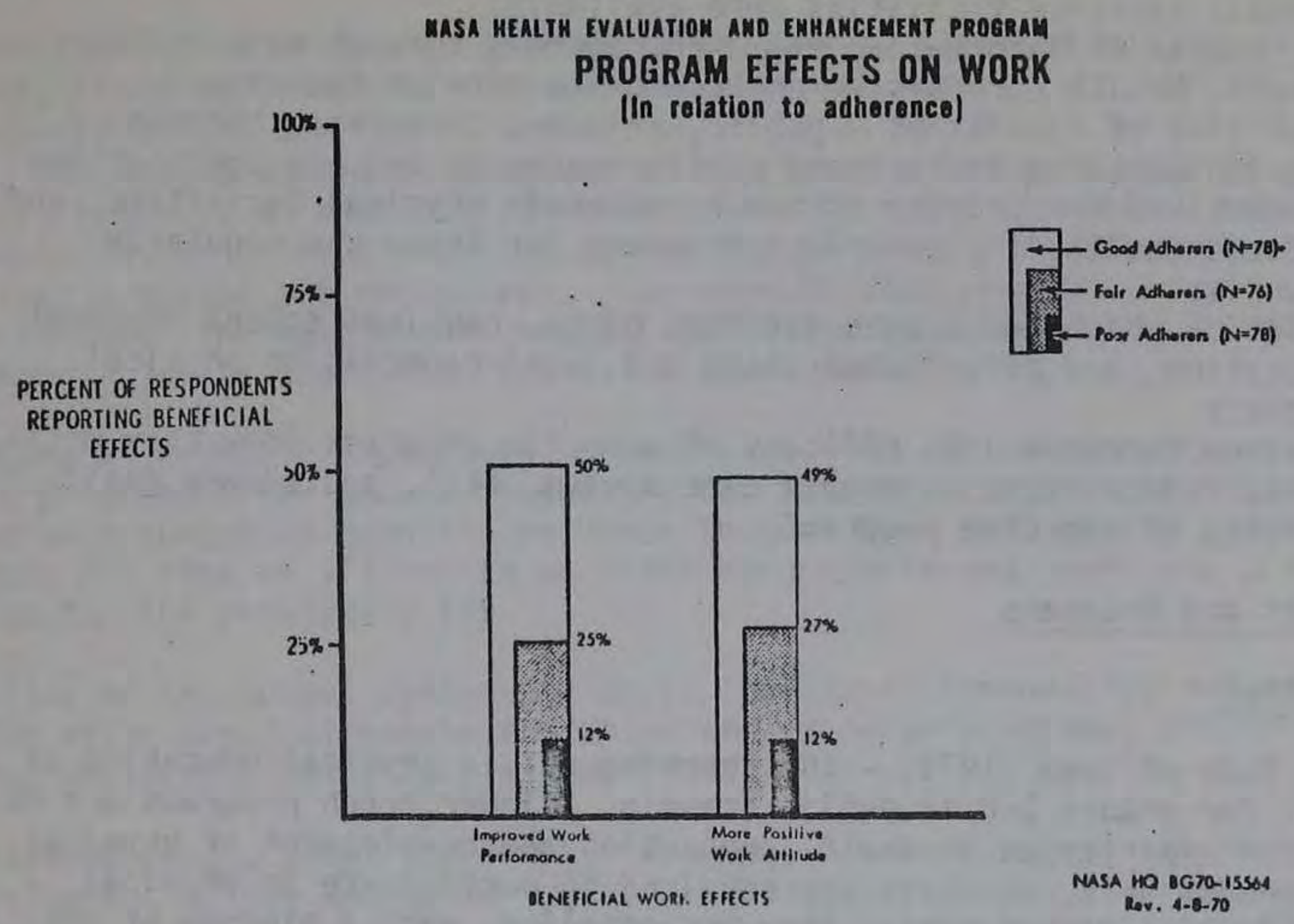
Data from companies which offer health and exercise programs for their employees report declining absenteeism, especially on Mondays. This is thought to be due to a generally healthier lifestyle adopted by these people. A health program initiated in 1968 by NASA for its employees resulted in participants stating that they enjoyed their work more and that they could work harder both physically and mentally. NASA employees who volunteered to participate in the "Health Evaluation and Enhancement Program". The results of a treadmill test were first evaluated and on medical history, dietary history, chest x-ray, blood work, or and urinalalysis were recorded. An attitudinal survey or perceived health status, health concerns and health behaviors was taken of the participants. Based on the above evaluation prescriptions were written as behavior to be changed. Group exercise and individual exercise facilities were available.

Changed health behaviors were noted at the following rates:

	good adherers	fair adherers	poor adherers
decreased eating	47%	36%	13%
more selective eating	43%	27%	15%
increased physical active	43%	24%	12%
more sleep/rest	30%	17%	4%
smoking less	15%	11%	3%

Beneficial health effects for good, fair and poor adherers were as follows:





SYSTEM

- federal policies by program or legislation by barriers addressed
- state policies by legislation by barriers addressed

Federal Policies

The President's Council on Physical Fitness and Sports, with about twenty staff people is the primary resource of physical fitness information and program consultation at the federal government level. Research is also supported by the Public Health Service of DHEW. Head Start, and Title XX Day Care Programs both recognize exercise as essential components of child care.

Federal legislation has been proposed, but not enacted, which would give states federal matching money to initiate physical fitness programs.

Prioritized methods of increasing physical fitness and exercise in Objectives for the Nation entail the accomplishment by 1990 a marked increased in:

- exercise programs in the school, workplace and community through greater coordination of local, state and federal and voluntary programs for all age groups were first evaluated on medical history, dietary history, the results of a chest x-ray, treadmill test, blood work, and urinalysis were recorded. An attitudinal survey of perceived health status health concerns and health behaviors was taken of the participants. Based on the above health evaluation prescriptions

were written as behaviors to be changed. Group exercise and individuals exercise facilities were available.
- public education/information and encouragement through mass media, school, health care system and community service agencies
- availability of facilities - public, private, corporate, through sharing existing facilities, public awareness and new construction
- tax incentives for private sector to maintain physical facilities, and reduced health/life insurance premiums for those who regularly exercise
- legislation which encourages national parks, requires school physical education, and established state and local councils on physical fitness
- evaluation/research into efficacy of exercise programs (how they motivate, reduce costs in health care system, etc), and survey availability of exercise program

State Policies and Programs

Legislation

Chapter 257, Code of Iowa (1979) - the teaching of ... physical education is a requirement for grades 1-8 in public schools. Kindergarten programs are required to offer experiences in the "..protection and development of physical being." In grades 9-12, students are required to participate in physical education activities each semester they are enrolled, with a minimum of one-eight unit per semester.

Programs and their strategies

The Highway Patrol of the Department of Public Safety participate in the only health program in Iowa for state employees. This program is funded through a federal law enforcement grant and is similar in its evaluation and prescriptive components to the NASA "Health Evaluation and Enhancement Program." The cost per empoloyee per year runs about $80. Regional coordinators provide follow-up to assure that patrols are following their prescriptions. While the program is effective in producing healthy behaviors, the same program for other state or company employees in the immediate future would require funds beyond which are available at present. However, a study of the dollars saved through such a program may justify more employers initiating such a program.

Through an ongoing federal High Risk Reduction Grant beginning in FY 1981 the State Department of Health, will coordinate a health program for state employees in the capitol complex. This grant, which was extended to replace block 314(d) grants to states, is part of the few federal initiative to increase preventive health services. During the first fiscal year the program will cover only health department employees, but the program will be expanded in subsequent to cover all employees in the capitol complex. In the first year finds for the program will be somewhere between $5,000and $10,000.

Because of the lack to date of any statewide, private or public, agency to coordinate employer, community and state physical education and exercise programs, the the extent of local and employer health programs throughout the state is not known. However, several larger companies in Iowa cities - such as Blue Cross/ Blue Shield, Rockwell International (Cedar Rapids), Townsend Engineering (Des Moines), or Rollscreen Company (Pella) offer comprehensive health programs for their employees.

Institutionalized Population ... (haven't finished data collection)

Other than those programs required of persons in licensed health care institutions, state governmental programs for physical fitness are limited to those sponsored by the Governor's Council on Physical Fitness. The Governor's Council, which is composed of 15 governor appointed volunteers, and has no paid staff, sponsors an awards program each year in which companies, schools and communities which have excelled during the previous year in developing physical fitness programs are recognized. The council also sponsors an annual run in Des Moines. The governor is requesting of the legislature in FY 1981 a $24,000 appropriation to staff the Physical Fitness Council.

Looking at economic incentives for exercise, few, if any, health or life insurance programs offer groups incentives for adopting exercise/health programs. Insurance companies need the evidence to show them that health programs in fact reduce the risk of ill health or death before offering lower and group policy rates for the physically fit.

Outside of the school system and those few larger communities and employers which offer physical health education and exercise programs, public information about physical fitness is limited.

Scattered state, local and federal progams, if coordinated, can lead to the development of new and better use of existing facilities and resources (parks, bikeways, fitness trails). The funding of a state program to coordinate such federal and state resources is needed.

STATUS GOAL 6: INCREASE THE PERCENTAGE OF AT RISK POPULATIONS, THE ELDERLY, WOMEN, AND LOW INCOME WHO REGULARLY EXERCISE.

SERVICE GOAL 6: THE COORDINATION AND GREATER AVAILABILITY OF STATEWIDE PHYSICAL ACTIVITY PROGRAMS AND IMPLEMENTATION OF OTHER STRATEGIES, (EDUCATIONAL AND ECONOMIC) IN ORDER TO INCREASE THE PERCENTAGE OF IOWA'S POPULATION WHO REGULARLY EXERCISE. (NOW ESTIMATED TO BE LESS THAN 50%)

Objective 1: By 1985, a staffed program available in state government to coordinate and provide consultation to local health/exercise programs.

SRRA 1: During FY 1981, SDOH implement health program for its employees.

Objective 2: By 1985, at least two health or life insurance companies offering employers and employees with effective health programs discounted premiums reflective of those groups' increased health.

Objective 3: By 1985, four more major companies having health/education exercise programs.

LRRA 1: SDOH or Governor's Council on Physical Fitness will inventory in Iowa health programs in workplace.

LRRA 2: Passage by legislative of governor sponsored appropriations for funding staff position for the Council on Physical Fitness.

References - Exercise

1. Healthy People, PHS, DHEW, p. 133
2. Ibid, p. 133
3. Ibid, p. 135

Stress Control

STATUS

Indicators

- precipitators of stress by kind
- stress by kind, by behavioral response or illness

A 1978 study of the Presidents Commission on Mental Health estimates that, at any point in time, up to 25% of the population is under stress sufficient to produce mild to moderate anxiety, depression, or more severe and long term affective disorders. The Commission also estimates that at any one point of time, at least 15% of the population could benefit from mental health preventive or treatment services. The effect of stress on individuals is a factor not only of the intensity of the stress itself, but, of the coping skills (ability to respond) of the individuals, and of the other social environment/ situations/ relationships which individuals experience.

Factors precipitating stress

Situations of the social environment which contribute to stress and people's inability to cope with stress include poverty, unemployment, and institutionalized discrimination. Poverty, unemployment and institutional discrimination are inturn related to: race (minorities), sex (females), social class (unskilled laborers), age (the young and very old), and mental capability and previous psychological treatment.

Other social environments - those of accelerated social change are related to high stress, and so require special coping skills or changes in the social situation so that their damaging effects are diminshed. These accelerated social change situations include: uprooting - displacement of the old and young, migration from rural areas and resettlement in urban areas; dehumanization of instititions - fewer personal contacts with other people; and, the spread of innovation - mechanization and technology applied haphazardly alienates workers from their work and co-workers. (1)

Teachers follow only air traffic controllers in the magnitude of job related stress which they experience.

Behavioral response to stress

Epidemiological studies of health status indicate that accelerated economic social change is tied to increased (2):

- crime
- mental hospital admissions
- mortality from suicide, and homicide
- morbidity from cirrhosis of the liver, cardiovascular diseases, and
- renal disease

Suicide is the ten leading causes of death in Iowa. Of the nine leading causes of years of life lost among persons less than 75 years of age (See TABLE 1 on p.57). Suicide ranks fourth highest, accounting for 5.7% of all years of life lost among persons under 75 years of age.

Iowa's rate of suicide (in 1977 it was 11.4 per 100,000 population) is less than the national rate. However, for young Iowans, the rate of suicide from drug overdose exceeds the national rate.

Three hundred forty three Iowans killed themselves in 1978. In general, suicides rates nationally and in Iowa increase as do many of the ten leading causes of death, with age. There was one suicide among the 5-9 year olds and 48 suicides among persons 40 and older in 1977 in Iowa. However 20-24 year olds have rates higher than 25-30 years olds in Iowa. Among persons less than 75 years of age the suicide death rate is 11.3/100,000 population.

Suicide is the second leading cause of death among teenagers and young adults age 15-24 in Iowa, second only to accidents. Teenagers and young adults less than 25 account for 20% of all suicides.

Nationally, firearms, the most frequent weapon used in suicide, are used four times as often as poisons, the second leading means of suicide. (4)

Homicide, while among the ten leading causes of years of life lost nationally, was not among the leading cause of years of life lost before age 75 in Iowa in 1977. Sixty-five Iowans were murdered in 1977, for a death rate of 13/100,000 population. Homicide reflects not only an individuals emotional illness, but his or her social, economic, and physical environment which contribute to an individual's choosing to murder.

Nationally, murder accounts for 10% of all deaths among adolescents and young adults. Over 20% of the murders in this country are between relatives or friends, and another 40% are between acquaintances.

Healthy People the Suregeon's Report on Health Promotion and Disease Prevention says:

> "Many factors undoubtedly are involved in our high homicide rate. Economic deprivation, family break-up, the glamorizing of violence in the media and the availability of hand-guns all are important. Firearms, the most frequently used homicide weapon in the United States, were involved in 63% of murders occurring in 1977, with handguns used in half and cutting or stabbing weapons employed in 18 percent".

Homicide is more common among the poor, and is associated with substance abuse.

During 1978, 6,565 cases of child abuse were reported in Iowa. Of this reported number 30% were determined to be actual abuse.

While some stress may be healthy, making social change more human as well as increasing the coping skills of individuals holds the greatest promise of decreasing morbidity and mortality associated with stress.

SYSTEM

Indicators

- federal policies by programs, by barriers addressed
- state policies by legislation by barriers addressed

Federal Policies

The Department of HEW sponsors a large number of projects directed at one or another of the components of stress management. Some of the current efforts involve such high-risk situations as suicidal behavior among vulnerable groups (e.g., college youth), but most of the activity seems to relate to specific practices (e.g., symptom recognition, compliance with health regimens, appropriate care seeking, and personal, self-detection).

Several Public Health Service health promotion programs have attempted to incorporate stress management, coping/adaptation, and self-esteem as target areas. National Institute of Drug Abuse in particular, has attempted to develop these approaches for youthful drug users. Fostering innovative approaches, such as self-care, would be one means to increase PHS activities in these related behavioral areas.

National Institute of Mental Health (NIMH) has supported numerous projects in different situations of stress of unusual difficulty among vulnerable population groups (e.g., decision-making in high-risk situations).

The goal of facilitating and strengthening coping skills and positive mental health abilities has been implemented in NIMH projects through a focus on self-esteem variables (e.g., sense of efficacy, competence, ego strength).

Various Office of Human Developement programs are designed to help people under stress manage their problems and cope with their environment. The programs attempt to prevent physical and mental illness and to promote positive lifestyles. Head Start and Tilet XX services encourages the development of sound health habits that can help the individual cope with problems of growing and developing. Title XX services also help with such problems as delinquency, teenage pregnancy, drug and alcohol use, dropping out of school and the disintegration of the family. To help families cope and adapt under modern conditions of stress, ACYF funds research and demonstrations related to the cause and prevention of child abuse and neglect. Administration and Aging provides services to help solve the problems of elderly persons under stress. (3)

Earlier in this chapter, primary, secondary and tertiary prevention are defined. Primary mental health prevention "encompasses those activities directed to specifically identified high risk groups within the community who have not been labeled as psychiatrically ill and for whom measures can be undertaken to avoid the onset of emotional disturbance and to enhance their level of positive mental health. Programs for the promotion of mental health are primarily educational rather than clinical in conception and operation. Their ultimate goal is to increase people's capacities for dealing with crises and for taking steps to improve their own lives".

Leon Eisenberg and Delores Painon in "Strategy for the Prevention of Mental Disorder", state:

> Primary prevention of psychiatric disorders has been called an unrealistic goal even in recent years. It has been viewed pessimistically because of the belief that social overhaul is necessary to achieve successful prevention of these disorders, that prevention is not cost-effective, that prevention is impossible without substantial knowledge of disease etiology of mental disorders or even that the causes are not subject to intervention. However, the public health record amply demonstrates that complete under-

standing of the etiology is not necessarily requisite to successful prevention. (9) As for cost-effectiveness, one quarter of all hospital beds are occupied by patients diagnosed as schizophrenics. The cost of long-term inpatient care far exceeds the cost required to implement secondary prevention programs by providing prompt and effective outpaitent treatment, as will be noted later.

In Objectives for the Nation, federal measures to be accomplished by 1990 are:

- an enlarged knowledge base through rigous scientific inquiry about stress and stress management
- determine level of stress knowledge and control technique used in U.S. population set objective to increase knowledge and use of effective techniques
- double number of employees reached through work based educational programs in largest 100 firms
- a minimum of 6 hours instruction in medical schools at understanding pathophysiology of stress and its management
- increase of 20% the patients in organized health care programs to who educational programs in stress control are offered.

State Policies and Programs

Legislation

- Chapter 257.25 (Code of Iowa 1979) requires health education "including an awareness of physical and mental health needs" for grades 9-12.

- Chapter 225 B, Unified State Mental Health Agency, Chapter 226, State Mental Health Institute, Chapter 227, County and Private Hospitals for Mentally Ill, Chapter 229, Hospitalization of Mentally Ill Persons, Chapter 230, Support of the Mentally Ill, and Chapter 230A. "Community Mental Health Centers" contain state policies on mental health services. However, these policies on mental health have few references to preventive programs. Chapter 230A, Community Mental Health Centers list "collaborative and cooperative programs and services with public health and other groups for prevention of mental illness, emotional disorders and other deliberating psychological disorders" as one of the services a center must provide if it wishes to provide a "comprehensive community mental health program". However, no center need provide comprehensive services unless it so chooses.

The extent and analysis of the problem of mental health preventive services in the state is contained in the Primary Care Chapter of this State Health Plan.

Programs and their strategies

State programs with regard to stress control in the work place, and other social situations which are of high stress are not known, and should be researched as part of assessing work-based health programs.

Mental health education and stress control was not found to be an area of emphasis in the schools offering health education, as summarized in the Department of Public Instruction's Comprehensive School Health Education Final Report" (October 1979). The Task Force Report recommends that comprehensive school health educa-

tion outcomes measures include student's ability to "analyze values which contribute to the development of personal and social maturity and successful interpersonal relationships.

Instead, personal health, nutrition, safety and first aid, family life and sex education and substance abuse were most emphasized.

STATUS GOAL 7: INCREASED ABILITY AMONG IOWANS, PARTICULARLY THE UNEMPLOYED, YOUNG, AND OLD TO COPE WITH HIGH STRESS SOCIAL SITUATIONS AND DECREASED INCIDENCE OF HIGH STRESS SOCIO-ECONOMIC SITUATIONS.

SERVICE GOAL 7: THE AVAILABILITY OF PROGRAMS THAT ENABLE IOWANS TO LEARN COPING SKILLS AND THE IMPLEMENTATION OF TECHNOLOGICAL AND ECONOMIC STRATEGIES IN ORDER TO DECREASE IOWANS STRESS DUE TO ACCELERATED SOCIAL-CHANGE.

Objective 1: By 1985, 5 major employers in Iowa implementing stress management programs as part of a work based health program.

LRRA 1: See action steps under objective 3 on page 95.

Objective 2: By 1985, for one occupation of high stress in Iowa, creation of an employer, worker and government volunteer committee to identify or implement strategies to make work more reqarding and less stress producing.

LRRA 1: SDOH staff will contact worker organization and employers to determine interest in particular profession.

Objective 3: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education, as defined in the 1979 Comprehensive School Health Education Final Report.

See actions on page 69.

Objective 4: Maintain a level of four community education workshops per month at each MHI.

SRRA 1: Staff at MHI's continue current outreach for community education.

Objective 5: By 1985, fifteen Community Mental Health Centers providing federally definded comprehensive services, including preventive education services.

LRRA 1: The three HSAs and the State Health Department will work with the Iowa Mental Health Authority and the Regional planning Groups to bring about more comprehensive services.

LRRA 2a: Statewide substance abuse/mental health planning bodies work with AEAsto determine the types of mental health prevention programs needed by school children and adolescents.

References - Stress Control

1. "Psychologial Factors in Preventive Medicine," L. Levi, Healthy People, The Surgeons Generals Report on Health Promotion and Disease Prevention Background Papers, PHS, DHEW, p. 214.

2. Ibid, p. 221.

3. Disease Prevention Health Promotion, PHS, DHEW, pp. 114, 130-131, 191.

4. Healthy People, PHS, DHEW, p. 50.

5. Ibid, p. 51.

Hazardous Agents

STATUS

Indicators

- hazardous agents by amounts, by kind, by
- hazardous agents by morbidity, by place of exposure
- hazardous agents by barriers to identifying them

Generally, the Code of Iowa, (1979) Chapter 455B.110, and the Environmental Protection Agency define hazardous agents as substances which cause or significantly contribute to an increase in death or in illness, or which pose a substantial danger to human health or to the environment. A hazardous agent may be: toxic (such as metals, salts, acids, radioactive materials), which by contact with or accumulation in the body produce anatomical, physiological, or biochemical changes in people; corrosive, which by contact cause visible and destructive changes in human skin or in other materials through chemical processes; flammable or explosive, which produce irritation fumes and burns; or, infectious, (biological agents from sewage, laboratories, health care facilities, etc., are discussed in another section, beginning on page 133). Many hazardous agents which are corrosive, flammable, or infectious are also toxic. (1)

The amounts of hazardous agents

The quantities of hazardous agents which industry in Iowa, including the health care industry, manufacture, use and dispose of are staggering. In Iowa, from industry, liquid and solid hazardous wastes alone (not country hazardous agents manufactured and used) amount to 35 million gallons of liquid and 600,000 tons of solids or 531 pounds per person per year. (2)

Little is known about the amount and kind of toxic agents which are produced and used each year. Although, the information will be counted as part of the inventory of toxic wastes stored and produced in Iowa now required of the Department of Environmental Quality.

Each year about 63,000 chemicals are commercially produced in the United States, and well over 1,000 new chemicals are begun to be commercially produced each year. People can now synthesize over 4,000,000 chemicals. (3)

While not all of these chemicals are hazardous, many are and many enter the market before their effects on health are known.

Health effects

Hazardous agents and possible hazardous agents are a growing concern to Iowans. But researchers draw conclusions about how hazardous substances---human made and natural---with difficulty. Conclusions are difficult to reach, particularly for toxic substances, because of: the long time between exposure and onset of illness (the effets of exposure to such toxic agents or radioactive materials and polychorinated biphenyls are generally delayed and chronic rather than acute); financial and political barriers to testing prior to marketing; and, poor methods of tracking persons exposed to hazardous substances. (4)

however, definitive evidence links cancer to at least 20 hazardous substances, and strongly associates at least 2,300 others. (5)

Places of exposure

Iowans are most likely to be exposed to known and suspected hazardous agents in the workplace, in their drinking water, in their food, in the air they breathe, or as part of health care treatment and diagnosis (mainly radiation). Work related injury and illness represent a major distinguishable place of exposure and so are contained in a separate section beginning on page 116.

In the water and land

Hyneston

Hazardous agents in our drinking water come from such "non-point" sources as run-off from and percolation through land after application of certain agricultural chemicals and run-off and percolation from waste disposal sites; and from such "point souces" as discharge from solid waste treatment facilities and industrial discharge. Although certain agricultural chemicals which are now used or which have been used in Iowa are proven or suspected hazardous agents (chlorinated hydrocarbons such as DDT are now banned but their residues remain), documented links to health problems in the general population of Iowa through drinking water contamination are scarce. One study in the Journal of Iowa Medical Society, by Dr. DeKracy (1979) shows that Iowans in the communities of Hamburg, Pella, Ottumwa, which take their drinking water largely from the Des Moines River or other Iowa rivers that have elevated parts of dieldrin (a chlorinated hydrocarbon) have unexpectedly high rates of lymphoma when compared to Iowans in the communities of Keosauqua and Oskaloosa which take their drinking water from deep wells or rivers with low dieldrin levels. Lymphoma rates in Ottumwa and in other communities which drink from the Des Moines River rose during the 1960s when dieldrin was widely used. (6)

The Department of Environmental Quality (DEQ) estimates that depending upon soil conditions up to 20% of the pesticides applied to Iowa fields is delivered to surface waters. (7) Pesticides used in the United States contain up to 1,500 different chemicals. Pesticide run off then becomes significant since about 75% of Iowa's land is cropland.

Percolation and run-off from stored hazardous wastes to drinking water poses a health problem not only in their kinds of but in the task of containing the huge amount of hazardous waste Iowans produce each year. The solid and liquid hazardous agents which are produced each year, could if placed in fifty-five gallon drums side by side line the entire boundary and the northern edge of Iowa twice. Of the 531 pounds of hazardous waste produced per person each year:

- 11% is shipped out of state
- 9% is dumped into sewer systems
- 14% is recycled; and
- 65% is stored at dump sites, and
- 1% goes to sanitary land fills. (8)

The National Wildlife Federation ranked Iowa (prior to enactment of H.F. 719, Chapter 455) 18th from the bottom in states with regard to effective management of hazardous wastes. (9) A 1976 study commissioned by DEQ found that 14% of these wastes were flammable, 76% corrosive, 5% unclassified, and 2% toxic. This 2% toxic wastes amounts to 13 pounds per Iowan per year. (10)

No one knows the all of the kinds and quantities of hazardous wastes at dumps in Iowa, or the extent to which these wastes have contaminated drinking water. However, arsenic, lead, zinc, mercury have been detected downstream from dump sites at Charles City and Orange City. DEQ has prioritized 10 sites needing further attention as they pose potential health problems. (11) Rates of cancer and other chronic conditions in communities downstream from these hazardous dumps, compared to the general population is not known. (9) However, lead poisoning, mercury poisoning (through the food chain), arsenic poisoning (arsenic is also a known carcinogen), cadmium poisoning, and chromium poisoning are known results of ingesting food or water highly contaminated with these chemicals. (13)

In the air

The most prevalent air born hazardous agents of health concern which the Environmental Protection Agency requires the State to monitor are:

- sulfur dioxide-from industrial waste and coal burning;
- nitrogen dioxide-from industrial waste,
- carbon monoxide-from internal combustion engine exhaust;
- ozone monoxide-from internal combustion engine exhaust; burning and other pollutants;
- particulates-from internal combustion engine exhaust; road dust, and industrial waste;
- lead-from internal combustion engine exhaust;
- hydrocarbons-from internal combustion exhaust; and industrial burning.

The illnesses with which these pollutants are associated.

Pollutant	Disorder
sulfur dioxide	aggravates empheysema, bronchitis; asthma, irritates senses
nitrogen dioxide	same, impairment of lung defenses, such as most cells
carbon monoxide	impairs exercise tolerance for persons with cardiovascular disease, impairment of central nervous system
ozone	impairs lung functions, possible acceleration of aging
particulates	emphe~~y~~sema, bronchitis, possibly contributable to ~~e~~tiology of lung cancer etiology
lead	anemia, impairs memogolbin and porhyrin synthesis
hydrocarbons	sensory irritation

The 1977-78 Annual Report of the Department of Environmental Quality states: "The air above 90% of our State's land will not harm people and property. However, aprroximately 45% of our population lives and works in the remaining 10% - the urban areas - where our air does not meet ~~our~~ air quality standards".

2.

The seven air pollutants monitored by DEQ are judged by two sets of standards: primary which sets levels of pollution above which human health is threatened; and more strengent secondary standards, which set levels of pollution above which plants, animals and property are threatened.

In 1978, places where primary or secondary standards were violated include: for sulfur dioxide - Dubuque and Des Moines; for ozone - Cedar Rapids, Council Bluffs, Davenport and Des Moines; for particulate - 12 cities; and, for carbon monoxide - Des Moines. Levels of these pollutants has remained relatively constant over the past three years.

No known studies relating these seven pollutants to incidences of specific diseases and deaths in Iowa are known.

Radiation - natural background and human-made

Repeated exposure to ionizing radiation (depending upon the dosage, ones biology, and environmental factors) is linked to cancer of the; paranasal and mastoid sinuses; pancreas; brain; stomach; breast; salivary glands; thyroid; GI tract; bronchus; lymph tissue; and to leukemia. Exposure to high levels of ionizing radiation can cause not only cancer, but genetic abnormalities in progendy, as well as other somatic illnesses. The very young and fetuses are particularly vulnerable to the effects of high level radiation. Generally, researchers agree that the commensurate increase in the risk of injury. Unnecessary exposure to ionizing radiation increased peoples risks of chronic rather than acute conditions.

To keep human made exposures to ionizing radiation as low as possible is essential and of top priority.

About 50% (80-270 millirens) of the 160-450 millirems of ionizing radiation to which Iowans expose themselves each year is from human-made equipment. Human-made sources are more easy to modify and to reduce then are natural sources of ionizing radiation. The natural ionizing radiation to which Iowans expose themselves is from direct exposure to environmental radioactive elements, diet and cosmic radiation.

Of the 80-270 millirems of human made ionizing radiation to which Iowans expose themselves approximately 90% is estimated to come from medical x-ray equipment, and 10% is estimated to come from nuclear fallout, discharge and waste from nuclear power plants, emanations from television receivers and luminous dials. Approximately 90% of the total exposure from human made ionizing radiation comes from medical x-ray equipment. A significant fraction of the x-ray dose attributable to medical and dental procedures could be reduced through the use of high speed films, shadow shields, and collimators; and through limiting the use of the x-ray machine operation to qualified personnel. With an estimated 6,000 medical and dental x-ray sources in Iowa, a reduction of unnecessary exposure in the healing arts is a prime concern. While the risk of exposure to ionizing radiation is offset by the benefits people gain, and the probability that such effects will occur, unnecessary exposures place both health care workers and clients at uncalled for risks.

Another, sort of radiation, nonionizing which primarily interacts with matter in a mode other than ionizion is also a health concern. Conjunctivitis, keratitis and skin cancer can result from high exposure. Nonionizing radiation may be produced by microwave ovens, lasers, ultrasonic cleaners, ultra violet light

(natural ~~in~~ and human made) and medical diathermy. Regulation of human made sources and health education regarding both natural and human made, the sources and how to avoid the ill effects, ~~and~~ can prevent the sickness precipitated by chronic exposure to nonionizing radiation.

SYSTEM

Indicators

- federal policies by enabling legislation by programs by strategies
- state policies by enabling legislation by barriers addressed

Federal Policies

General water quality and drinking water

Clean Water Act of 1977 - The Environmental Protection Agency is to set up standards for four discharges and issues permits to achieve fishable and swimmable water. For hazardous spills, EPS is to develop national contingency plan to coordinate spill response, level penalties and recover costs.

Safe Drinking Water Act of 1974 - Creates national standards for safe drinking water and controls injection of hazardous substances underground which could contaminate aquifers used for drinking water.

Food, medical equipment

Food, Drug and Cosmetic Act of 197 (P.L. 75-717)
Sets standard for contaminant is food for interstate commerce; bans unsafe foods. The Food and Drug Administration's National Center for Toxicological Research test substance for carcengogenicity and mutagenicity. The FDA houses a Nuclear Medicine Laboratory and Bureau of Radiologic Health which investigates hazardous of nuclear medicine, and investigates the health effects of microwaves, light, and sonic radiation. Other Bureaus include Food (FDAs lagest), of Drugs, and of Medical Devices.

Pesticide

Federal Insecticide Fungicide and Rodenticide Act (amended in 1975) - requires registration and classification of all pesticides.

Chemicals

Toxic Substances Control Act of 1976 - Gives the EPA power to prevent chemical substances from entering the environment before these substances treatened human health. Requires: EPA to inventory commerical chemicals to identify and test potential hazards; all chemical companies to report certain information and to give prior notice before using commercially new chemicals; EPA to control chemical substances found to pose an unreasonable risk.

Waste disposal

Resource Conservation and Recovery Act of 1076 - Establishes standards for producers, transports, and disposal sites of hazardous wastes.

Air quality

Clean Air Act of 1970 - Mandates EPA to set emission standards for seven air pollutants.

Nuclear waste

Atomic Energy Act - Licenses and sets standards for nuclear energy waste and waste disposal.

The Department of Health and Welfare (DHW) funds lead based poison control programs; and sanitation and pesticide control program through the Health Services Adminsitration Community Health Center and migrant health centers.

The National Cancer Institute of DHW surveys cancer rates in geographic areas in searching for possible new sources of cancer. The National Institute of Environmental Health and Safety works on prediction, detection and assessment of environmentally caused diseases and disorders.

Regulatory, educational and economic strategies

Most of the policies of the nation for hazardous agents are regulatory.

A draft of Objectives for the Nation (DHEW 1979) identifies the following barriers to effective regulation at the national level:

- reactive rather than anticipatory control of rapidly changing industrial production
- regulatory agencies promoting the industry which they regulate
- lack of reconciliation between the increased consumption with the social goal of health protection, court legislative and administrative decisions regarding regulation are unpredictable
- inadequate funding
- agency delays on establishing regulations and compliance schedules

Objectives for the Nation suggest that by 1990:

- Toxic agent emergency response teams be established
- central national clearinghouse for surveying agent/illness relationships, and a registry for all national data on hazardous agents is air, food, and water
- the state of the art for identifying hazardous agents in epidemiology, animal testing, in-vitro tests, and chemical structure, biological activity relationships be improved greatly
- with regard to education: health care providers, industrial managers, consumers and workers should be fully informed of the toxic substances to which they are exposed, the health hazards, and how to control their exposure to these toxic agents
- with regard to regulatory efforts: standards for all groups of toxic agents should be enforced; all regulatory efforts should be coordinated; the Toxic Substances Control Act should be fully enforced; content use and disposal labeling complete on commercial hazardous agents; past hazardous disposal sites should be detoxified; operational standards for health care exposures to toxic agents; replacement of high acute toxicity pesticides with safety substances priority 10% most hazardous in use each year; OSHA field regulation of

pesticides (Agriculture now has authority); mobile monitoring of gasoline and diesel vehicles; beginning with HMO's clinical leadership set up monitoring standards for environmental disease; and FDA continue to ban (or with some discretion ban) carcinogenic food additives.

- with regard to economics: sufficient penalties to incent people to abate polluting; tax incentives for industry to reduce pollution; tort suits and injunctives relief for exposing consumers, workers and public to toxic agents; and strict liability for industrial waste disposal
- with regard to services and adequate screening treatment and,
- with regard to technology; continued development of new method of reducing pollution.

State Policies and Programs

Legislation

Water quality and drinking water

Chapter 455B.30 - 74, Code of Iowa (1979)- Authorizes the Department of Environmental Quality to prevent abate or control water pollution and to conduct a public water supply program including establishing standards for effluent. DEQ is also authorized to classify water treatment plants and water distribution systems and certify operations and distribute sewage works construction fund monies.

Food

See Nutrition Section Page 84 Chapter 189 - Food, Drugs and Other Articles

Pesticides

"Pesticides", Chapter 106, Code of Iowa (1979) - Gives the Department of Agriculture job of certifying commercial applicators, dealers, and registration of pesticides sold in Iowa, filing of pesticide related injury complaints confiscation of misbranded or adullerated pesticides, and provides for penalties of misdimeanor for violations.

Chapter 455B.130-137 - Establishes Chemical Technology Commission whether DEQ which is: to collect and analyze information relating to toxicity of use of and alternatives to agricultural chemicals, and to coordinate for agricultural chemical various state agency responsibilities; including the sale, transport and disposal; to restrict as necessary sale and use of agricultural chemicals; and to requiring reporting of suspected livestock poisoning.

Chemicals

See pesticides above. State agency responsibility with regard to the federal Toxic Substance Control Act are not known.

Waste disposal

Chapter 4555.76 - 83, Code of Iowa (1979) - Requires cities and counties to establish and operate program for solid wastes; sets up Solid Waste Disposal Commission within DEQ for hazardous wastes.

Air quality

Chapter 455B.10 - 29 - Gives DEQ regulatory responsibility for air contamination.

Nuclear wastes

Chapter 455B.85 -94 - Establishes within DEQ authority: to regulate transportation, storage, handling and of radioactive material, except medically used radioactive materials; to license nuclear waste disposal sites.

Chapter 136C, Code of Iowa (1979) - Regulates per the State Department of Health radiation producing medical equipment and materials used in Iowa.

Chapter 136B, Code of Iowa (1979) - Creates a Inter-Agency Coordinating Council to develop a state radiation safety plan and evaluate and coordinate the radiation safety rules proposed or promulgated by member agencies.

Hazardous conditions

Chapter 455B.110 - 120 - Gives DEQ responsibility to advise local and state agencies on hazardous conditions, to develop a hazardous conditions contingency plan, to provide for removal of hazardous conditions. In the case of spills, agricultural pesticides and fertilizer are exempt as are air water quality conditions, over which other state agencies move responsibility.

Programs: regulatory, educational and technological strategies

Water quality and drinking water

To date, DEQs work to remediate and maintain the general quality of Iowas streams and lakes centers foremost an municipal and industrial pollution sources.

Although, DEQ recognizes non-point pollution from agricultural lands as a major problem. The agency has set minimum waste control standards for animal wastes from feedlots, and publiqshed suggestion for the 208 Program for "Best Management Practice".

Between 1974 and 1978, 115 of the municipalities in Iowa built sewage treatment plants: Three hundred and forty-five of the approximately 950 other cities are developing or planning to develop waste water treatment facilities. Only about 79% of Iowa's industries provide proper waste water treatment. During FY 1978, twenty-one refferrals were made to the State Attorney General for effluent violations from waste water treatment facilities. But only three industries were fined at total of $112,500 for water pollution violations.

A draft of priority environmental concerns on which citizens are to input and on which DEQ is to reach agreement with EPA as a method of negotiating federal grants awarded the state names the following continued problems.

- contamination of streams and lakes from non point source pollution
- lack of state and EPA established criteria for sediments
- failure to construct municipal waste water treatment in a timely fashion results in continued water degradation
- major municipal and industrial discharges are not being properly operated causing water quality problems

- discharges from feedlots are contributing to considerable quantities of chemical and bacteriological contamination to the waters of the state (Only 12% of the discharges requiring state permits have applied and received permits)
- information in the Discharge Monitoring Reports is of questionable quality which creates the possibility of environmentally unacceptable discharges
- incompatabile industrial discharge into municipal treatment works may be causing water quality problems
- certain areas of the state have high nitrate in groundwater which presents a health and economic hazard
- nitrate levels in groundwater exceed drinking water health standard
- groundwater is being or has the potential of being contaminated by agricultural and other sources of pollution
- a number of public water supplies having levels of radionuclides that exceed the public health standard
- flouride concentrations are unacceptable in some supplies

DEQ began implementing the Safe Drinking Water Act in September of 1977. Under this Act local water supplies must inform the public when violations of water standards occur and assist people in taking precautions during violations of quality standards. A Model State Information System is being designed to monitor compliance of the more than 825 (serveing 72% of Iowas population) municipal water supplies. In the state there are more than 3000 community and non-community water supplies. Specific problems regarding the Safe Drinking Water Act's implementation are not known.

Hazardous wastes

Only in 1979 did the state pass legislation, HF 719, to control hazardous waste dumping on privately owned land through the granting of permits. HF 719 has only begun to be implemented.

However several loopholes exist in the legislation which could lessen the effectiveness of the law. These loopholes are the exemption of agricultural wastes from the act, and the exemption of dump sites which are do contain only "non-hazardous" wastes. Of the two loopholes, the exemption of agricultural wastes poses the most significant health threat.

Apart from these loopholes, the effective implementation of hazardous waste control afforded through HF 719 should be apparent within the next five years in the lessened contamination of waste downstream from particularly hazardous dumps.

EPA has yet to publish all regulations pursuant to the Resources Conservation and Recover Act by which DEQ is to implement HF 719. Initially, 70,000 public and private agencies in Iowa will be notified of the Hazardous Waste law and 5,000 to 10,000 potential generators will be contacted. However, 2/3 of these will be exempted from regulation by the various provision of the Resources Conservation and Revovery Act. (12)

The states role in the implementation of the Toxic Substance Control Act is ...

Possible priority health problem in Iowa which DEQ and EPA are considering including:

Salsbury?

- the Salsberg and LaBounty Chemical dumps which could potentially pollution
- PCBs stored in Iowa
- the Vogel Paint dump site
- regulation of meat processing plant, seed corn companies, paint companies which produce unique waste
- toxic waste disposal in general
- old landfill criteria allow teaching of toxic sales taxes
- access of hazardous waste producers to disposal sites

substances?

Air quality

In those 12 communities which have non attainment of some of the seven standards for particular pollutants, the federal Clear Air Act requires potential polluters to follow an "emissions offset policy." This policy requires that the new polluters see that existing polluters in the area reduce their emission by the amount which the new polluter will emit if they are to come into a non attainment area. Cities which have yet to meet the air quality standards are now making choices about traffic, mass transportation, motor vehicle inspection in order to comply with DEQs standards. State legislation requiring more steringent pollution contracts on motor vehicles is needed. In communities which now meet all standards, new industries must demonstrate how they comply with the communities growth plan for manitaining air quality before they build in those attainment communities.

DEQ data show (1978) that 90% of all industries in Iowa are in compliance with emission standards set for their particular pollutants. Since 1972, DEQ certified $116 million dollars worth of pollution equipment as tax exempt.

Problem statements which may be chosen by EPA and DEQ as priority areas for air pollution in Iowa are:

- deterioration of pollution control equipment that has not been properly maintained or that is faulty
- the effects of acid rain was increased coal combustion is unknown
- asbestos in schools presents a potential health hazard

Two possible priority problems for noise are also posed by DEQ and EPA:

- high levels of noise from stationary objects
- high levels of vehicle noise in many communities

Radiation safety

H.F. 82, which passed in the 66th General Assembly in 1977 and went into effect in January 1979, requires the State Health Department to develop a statewide program for regulating all uses of radiation emitting equipment. H.F. 82 will result in the identification of radiation users, the development of operation and training criteria, the establishment of minimum equipment safety requirements, and limitatn of radiation emitting operation to qualified personnel.

High energy particle accelerators are used in physical and chemical research activities and various industries processes. Such accelerators produce high energy particles and ionizing electromagnetic radiation. High energy electrons are used for future sterilization and for curing of plastics, among other things. Accelerators employing high energy heavy particles such as netrutons, protons, element nuclei, tc., also produce radioactive material by bombarding stable nuclides.

Regulations pursuant to H.F. 82 have been developed and are expected to be promulgated early in 1980. These regulations include provisions for the inspection of radiation emitting equipment, radiation facilities and operating personnel and the development of operating procedures and training criteria for users. The scope of these regulations include x-ray machines, accelerators and radioactive material not under the jurisdiction of the Nuclear Regulatory Commission (NRC). Drugs, however, are excluded from H.F. 82 jurisdiction including any radio-pharaceuticals composed of natural or accelerator radioactive material which is not regulated by N.R.C.

It should be noted that the Federal "Radiation Control for Health and Safety Act of 1968" sets peformance standards for electronic products which, emit the life of the equipment, and requirements regarding defects, recall and replacement procedures are stipulated. Equipment manufactured prior to the effective date of a standard would be excluded from being required to meet that standard. In these cases state control would be necessary to assure equipment safety.

Eventually as the older equipment is phased out the Federal standards will become increasingly applicable. This standard does not, however, prevent operator misuse, inadequate safety precautions, or improper maintenance from causing unnecessary exposure to patients or employees. These factors will continue to require state control.

STATUS GOALS 8: DECREASE EXPOSURE TO TOXICANTS IN THE DRINKING WATER, FOOD, AIR WHICH IOWANS BREATH FROM HAZARDOUS AGENTS PRODUCED, USED, AND DISPOSED OF IN IOWA.

SERVICE GOALS 8: REGULATORY ECONOMIC, AND TECHNOLOGICAL STRATEGIES SUFFICIENT TO EFFECTIVELY REMOVE THE HEALTH THREAT FROM THE ENVIRONMENTAL TOXICANTS.

WATER QUALITY/HAZARDOUS WASTES

Objective 1: By 1985, a Hazardous Waste Control program fully implemented.

LRRA 1: DEQ will take steps to educate the general public about proper hazardous waste management techniques.

LRRA 2: DEQ will gather information on the types, quantities, and hazards of wastes produced in Iowa.

LRRA 3: DEQ will obtain delegation to administer RCRA hazardous waste program in Iowa.

LRRA 4: Obtain legislation to close loopholes in HF 719, and develop rules for an effective hazardous waste management program.

Objective 2: By 1985, a state program pursuant to the Toxic Substance Control Act implemented.

LRRA 1: DEQ will take steps to obtain delegation to administer TSCA in Iowa.

LRRA 2: DEQ will obtain legislation and development for an effective hazardous.

will attain?

AIR QUALITY

Objective 3: By 1985, all air quality control programs regions at least the primary national ambient air quality standard.

LRRA 1: DEQ will continue to work with local governments and industries to assure compliance by 1985.

will be

RADIATION

Objective 4: By 1985, 50% of all radiation emitting equipment in compliance with state rules.

LRRA 1: By 1981, SDOH will register all radiation emitting equipment located in the state.

LRRA 2: By 1983, SDOH will register all, except practitioners, the operators of all diagnostic x-ray machines used in the practice of medicine, osteoathy, dentistry, chiropractic and podiatry.

LRRA 3: The SDOH will continue to provide expertise for emergency and radiation accident response and participate in emergency planning and exercise activities.

References - Toxic Agents

1 "Waste Alert" pamphlet prepared by the National Wildlife Federation

2 "Hazardous Substances and Pesticide Survey and Training Program", prepared for Iowa Department of Public Instruction, Office for Planning and Programming, Iowa Department of Agriculture, U.S. Environmental Protection and Agency, and Iowa Department of Environment Quality, by David Pierce, Garrity - Sands Associates, Inc., Mason City, Iowa, 1977

3 Healthy People - The Surgeon Generals Report on Health Promotion and Disease Prevention, US DHEW, PHS, Washington, D.C., 1979, p. 103.

4 "Improving the Quality of the Work Environment", Lehmann, P., and Kalmar, V., Healthy People - The Surgeon Generals Report on Health Promotion and Disease Prevention Background Papers; U.S. DHEW, PHS, Washington, D.C., p. 397

5 Preventing Disease/Promoting Health: Objectives for the Nation, US DHEW, 1979, p. 38

6 Des Moines Register, "Pesticides in Iowa Rivers and Rising Cancer Rates, Dr. DeKraay, editorial page, 1979

7 1977 Water Quality Report, Department of Environmental Quality, 1977

8 Iowa Department of Environmental Quality 1977-78 Annual Report, p. 12

9 Des Moines Register, Public Opposition, Fear of Sites Clog Machiners of Waste Disposal, Paxton, R., Kneeland, P. and Knauh, O., February 12, 1980

10 Water Quality Report, Iowa Department of Environmental Quality, 1977 p. v

11 "Public Opposition, Fear of Sites Clog Machiners of Waste Disposal, Des Moines Register Febraury 12, 1980

12 "Iowa Solid Waste Management Strategy", Department of Environmental Quality, July 1979, pp. 32-33

13 Statistics Needed For Determining the Effects of the Environment on Health, US DHEW, PHS, p. 27

14 Ibid., p. 27

STATUS

Indicators

- injury and illness rates in U.S.
- toxicants by kind, by source, by disease, by population at risk
- population at risk by related disease rates

The Hazardous Agents Section of this chapter contains an analysis of health status as affected by hazardous agents in our water, food, and health care. Here, is an analysis of exposure to hazardous agents in the workplace.

In "Improving the Quality of Work Environment", P. Lehmann and V. Kalman say this about toxicants in the workplace: "Environmental exposures are extremely varied, and in many cases their impact is hard to measure... because most chronic diseases develop over a prolonged period. Yet, for one category of environmental exposure--those that occur in the workplace--the situation is somewhat easier to define and potentially to control.

"Perhaps the most important characteristic of occupational related diseases is that they are almost wholly preventable...the hazards to which workers are exposed are or could be enumerated and measured...the occupational environment can be a laboratory for assessing the potential effects of hazards in the population at large."

Occupational illness vs injuries

Job related injuries, job related illness (disease) and job related deaths are measures of occupational health. Job related injuries are relatively easy to count. But, problems arise in the identification of occupational illness. These problems are similar to those for other environmental exposures to hazardous materials. Workers move often which makes tracking difficult. Mutible exposures in and outside the work environment, such as exposures to tobacco smoke coupled both work exposure to asbestos, contribute to illness from hazardous substances. And, many workplace hazardous agents are inadequately tested and controlled.

Injuries

In the United States each year, about 13,000 workers die, and 9,000,000 workers lose work time due to job related injuries. Nationally miners, agricultural workers, and construction workers are 3-6 times more likely than other workers to die of job related injury.

Illnesses

From job related illness, 100,000 American die each year. Detected new cases of occupational illness number 400,000 each year. Hazards to health vary with particular jobs. Some pesticides workers have infertility rates 2-3 times that of the national average. On the job, American Workers use about 34,000 chemicals. Of that number, 2,000 are potential human carcenogens. Objectives for the Nation (DHEW 1979) estimates that 9 of 10 American industrial workers are not adequately protected from at least one of the 163 most hazardous chemicals, and that 20% of

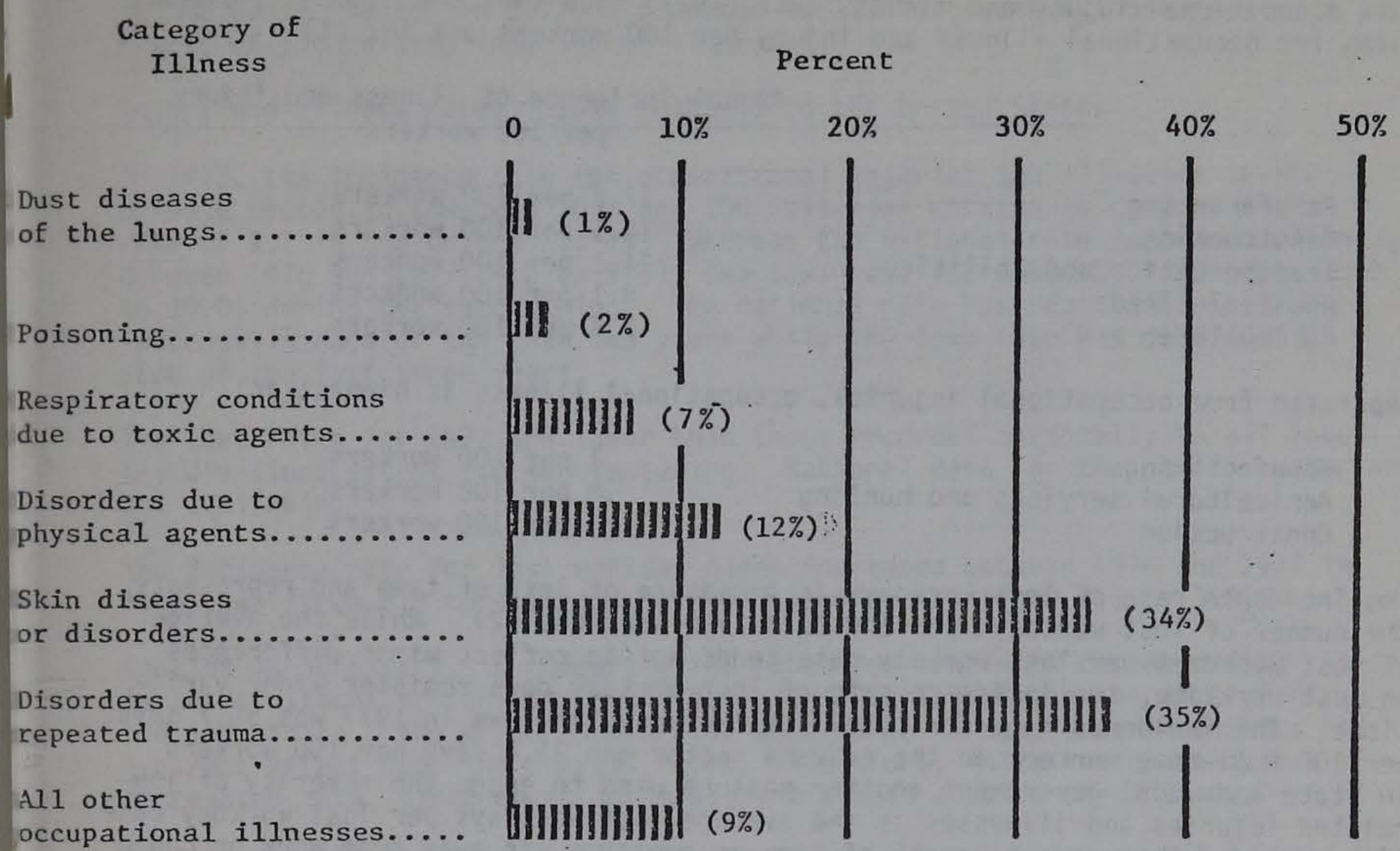
all cancer in the United States is job related. In the workplace, some of the most common hazardous agents include:

Toxicants by Related Illnesses and by Sources

Acrylonitrile	Lung cancer, colon cancer	Manufacturers of apparel, carpeting, blankets, draperies, synethic furs, and hair wigs.
4-aminobiphenyl	Bladder cancer	Chemical workers.
Arsenic	Poorly differentiated epidermoid bronchogenic carcinoma, skin cancer, scrotal cancer, cancer of the lymphatic system, hemangiosarcoma of the liver.	Workers in the metallurgical industries, sheep-dip workers, pesticide production, copper smelters workers, children living near copper smelters, people living where arsenical insecticide was sprayed, vineyard workers, insecticide makers and sprayers, tanners, miners (gold miners).
Asbestos	Asbestosis (pneumoconiosis), cancer of lung, GI tract, larynx, mesothelioma.	Asbestos factory workers, textile workers, relatives of asbestos workers, people who live near asbestos factories, rubber-tire manufacturing industry workers, miners, insulation workers, shipyard workers.
Auramine	Bladder cancer	Dyestuffs manufacturers, rubber workers, textile dyers, paint manufacturers.
Benzene	Aplastic or hypoplastic anemia, leukemia	Rubber-tire manufacturing industry workers, painters, shoe manufacturing workers, rubber cement workers, glue and varnish workers, distillers, shoemakers.
Cadmium	Lung cancer, prostatic cancer	Cadmium production workers, metallurgical workers, electroplating industry workers, chemical workers.
Carbon monoxide	Neurological and behavioral disturbances	Miners, workers in the iron and steel industry, and in gas plants.
Carbon tetrachloride	Liver and Kidney damage	Plastic workers.
Chloromethyl methyl ether (CMME)	Lung cancer	Chemical workers, workers in plants producing ion exchange resin.

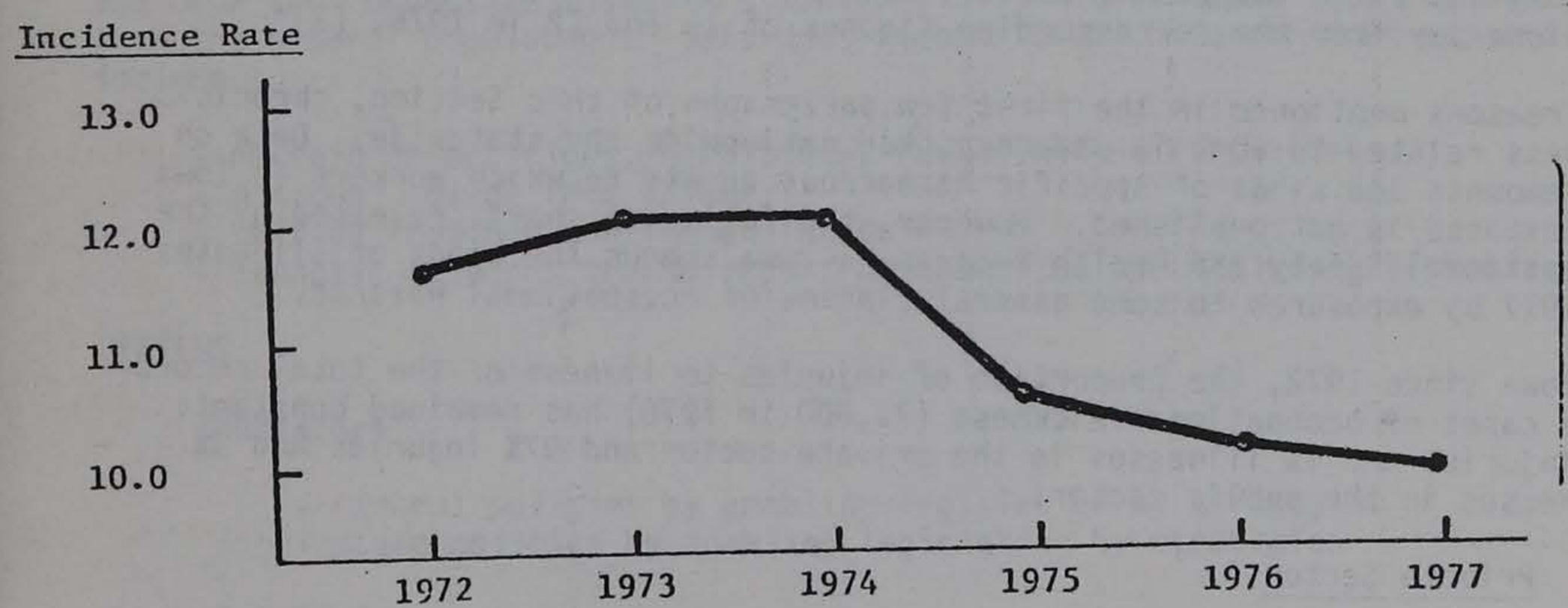
Chloroprene	Central nervous system depression, lung, liver, kidney injuries, lung and skin cancer, miscarriages.	Workers in rubber-producing plants.
Coal tar pitch volatiles	Lung cancer, scrotal cancer	Steel industry workers, alumninum potroom workers.
Coke oven emissons	Lung cancer, kidney cancer	Steel industry workers, coke plant workers, children born of female steel industry workers.
Hair spray	Chronic lung disease	Hairdressers.
Heat	Decreased alertness, decreased psychomotor coordination.	
Kepone	Weakness, tremors, numbness, tingling, blurred vision, temporary memory loss, loss of balance.	Kepone (insecticide) plant workers, agricultural workers.
Lead	Miscarriage, birth defects, defects in hearing, eye-hand coordination, anemia, acute encephalopathy, "Lead colic" (abdominal pain), decreased male fertility decreased muscular strength and endurance, end stage renal disease, wrist drop, hostility, depression, anxiety.	Lead production workers, lead battery plant workers, smelther workers.
Leptophos	Weakness, tremors, numbness, tingling, blurred vision, temporary memory loss, loss of balance.	Insecticide production workers, agricultural workers.
Mercury	Nephrosis, pneumonitis, bronchitis, chest pain, shortness of breath, coughing, neurological and behavioral disturbances.	Dental assistants, dental hygienists.
2-napthylamine	Bladder cancer, pancreatic cancer.	Dyeworkers, rubber-tire manufacturing industry workers, chemical workers, manufacturers of coal, gas, nickel refiners, copper smelters, electrolysis workers.
Noise	Headaches	Factory workers, construction workers, textile workers.
Radiation	Cancer of paransal and mastoid sinuses, cancer of the: skin, pancreas, brain, stomach, breast, salivary glands, thyroid, GI organs, bronchus, lymphoid tissue; leukemia, multiple myeloma.	Uranium miners, radiologists, radiographers, luminous dial painters.

PERCENT DISTRIBUTION OF OCCUPATIONAL ILLNESSES,
BY CATEGORY OF ILLNESS, 1977



NOTE: Combined data for the private sector and state and local government.

TREND OF OCCUPATIONAL INJURY AND ILLNESS
INCIDENCE RATE, PRIVATE SECTOR, IOWA, 1972-1977



NOTE: Rates exclude mining and railroad activities in 1972 and 1973, railroads in 1974, and farms with fewer than 11 workers in 1976 and 1977.

Iowans' injuries and illnesses - occupations at-risk

Iowa occupational injury and illness data (1977) show that the highest incidence rates for occupational illness and injury per 100 workers are in: (1)

	Annual incidence of illness and injury per 100 workers
Manufacturing	17.2 per 100 workers
Construction	14.1 per 100 workers
Transportation and Utilities	14.1 per 100 workers
Wholesale Trade	8.1 per 100 workers
Agriculture	7.4 per 100 workers

Separated from occupational injuries, occupational illness is highest in:

Manufacturing	1 per 100 workers
Agricultural services and hunting	.8 per 100 workers
Construction	.4 per 100 workers

The incidence rate of lost workdays is a measure of loss of time and represents the number of lost workdays per 100 full-time workers. (2) While the average of lost workdays per lost workday case tends not to reflect minor differences in lost worktime, the incidence rate of lost workday does register wider variations. The incidence rate for total lost workdays in Iowa in 1977 was 55.7 days per 100 full-time workers in the private sector and 31.4 days per 100 workers in state and local government another measure used to gauge the severity of job-related injuries and illnesses is the average lost workdays per lost workday case. This provides the average length of time an employee was away from work or could not perform all regularly assigned duties because of an occupational injury or illness.

Private and public sectors - a comparison

The average number of lost workdays per lost workday case was 14 in the private economy and 11 in the public sector in Iowa in 1977. These averages are each down one day from the corresponding figures of 15 and 12 in 1976. (3)

For reasons mentioned in the first few paragraphs of this Section, chronic illness related to work is underreported nationwide and statewide. Data on the amounts and kinds of specific hazaardous agents to which workers in Iowa are exposed is not published. However, the following chart, released by the Occupational Safety and Health Program in Iowa, shows the kinds of illnesses in 1977 by exposures to some general classes of occupational hazards.

In Iowa since 1972, the proportion of injuries to illness of the total recordable cases of occupational sickness (71,600 in 1976) has remained constant: 96 injuries and 4% illnesses in the private sector and 97% injuries and 3% illnesses in the public sector.

Private Sector

During 1977, work injuries and illnesses in Iowa's private sector industries caused the loss of a reported 408,663 workdays, or the equivalent of a full year's work over 1,600 workers. Over half of all the lost worktime occurred in the manufacturing industries.

Public Sector

In the public sector in 1977, a reported 42,213 lost workdays occurred as a result of job-related injuries or illnesses.

Injury and illness rates: Iowa compared to the United States

In 1977, the incidence rate for occupational injuries and illnesses in the private sector in Iowa was 10.0 per 100 full-time workers as compared to a rate of 9.2 in the United States. Whereas the national rate increased slightly between 1976 and 1977 (9.2 to 9.3), the Iowa rate decreased by 2 percent (10.2 to 10.0) during the same period. The national rate has registered a slight increase in each of the last two years while the Iowa rate has declinded in each of the last three years.

The Iowa rates for 1977 are lower than those recorded nationally in all industry divisions except for manufacturing. National data for the public sector are not available.

The incidence rate for lost workday cases increased between 1976 and 1977 in both Iowa (from 3.8 to 4.1) and in the United States (from 3.5 to 3.8).

Caution is necessary, in comparing the rates for Iowa with corresponding rates for other states or for the nation because of variations in the size of firms and industries. The proportion of the work force in hazardous industries has a direct effect upon the overall rates. Therefore, in making comparisions of aggregated data, differences in industry mix must also be considered.

In 1978 in Iowa 30 of the 76 accidental deaths were of agricultural workers. Thirteen and ten of these 76 deaths were attributable to construction and transportation workers. (4)

Farmers at-risk

Certain cancers - leukemia, prostate, stomach, lymphatic, bone marrow, brain, and bone and connective tissue are substantially higher among Iowa farmers than the general population. Hazardous agents to which farmers are exposed include:

- certain insecticides, herbicides, fungicide and fertilizers
- nitrous oxide from silage
- sulfide from hog confinement units
- zoonotic diseases transmitted from animal to man including leukemia. (5)

SYSTEMS

Indicators

- federal policies by enabling legislation by strategies
- state policies by enabling legislation by strategies

Federal Policies

See federal policies section of hazardous substances section for description of other related legislation.

Occupational Safety and Health Act of 1970 - Requires employers to keep records of job related injuries and illnesses; employers to comply with standards promulgated by the Occupational Safety and Health Administration (OSHA) within the Department of Labor. Criteria for standards are developed by the National Institute for Occupational Safety and Health (NIOSH) within the Department of Labor. The Department of Health and Welfare provides researchers technical support and quality control, manpower development for OSHA/NIOSH.

Federal Mine Safety and Health Act of 1977 - Created within the Department of Labor the Mine Safety and Health Administration to establish and enforce standards.

An effective system to protect and promote workers health is one which not only improves health and reduces the costs of job related illness, but one which also has the support of labor industry, service providers and the larger community. Such a system encompasses these elements:

- Regulation - workplace monitoring, safety consultation standards development and enforcement
- Clinical Services - emergency, diagnostic and rehabilitation
- Health Education - for workers, employers as well as regulators and consultants (industrial safety engineers and hygienists)
- Surveillance and Research - disease reporting, record keeping and research
- Economic incentives - for employers and employee to implement technology and practices which make for healthier environment

The element of Regulation is legislated in the Toxic Substances Control Act, the Occupational Health and Safety Act and the Federal Mine and Safety Act.

OSHA - strategies for regulation and education

OSHA is required by law to regulate more than 400 substances. However despite existing since 1971, by the end of 1978, OSHA and NIOSH promulgated standards for only ten of the 23 most hazardous substances. OSHA has written but not finally implement over 100 sets of standards.

To date, problems which result in OSHA being mainly ineffective encompass:

- Underfunding - only 2,500 inspectors are employed in the federal and state programs. Larger workplaces are reached every four years, smaller workplaces, theoretically, once every 215 years. With 25% of labor force in small businesses which use 20% of hazardous chemical produced each year, OSHA is understaffed
- Regulatory delays - Due to industry's lobbying and to OSHA administrative oversights, only ten major health hazard standards have been filed covering 23 substances
- Insufficient legal and financial incentives to industry. Many businesses, except the very large ones with organized labor, do not prioritize the health and safety of employees
- Lack of worker understanding of the hazards to health
- Dearth of knowledgeable occupational health professionals - industrial safety has been left out of health professionals training; ideally would be intergrated into health care system
- Poor research data - substances are manufactured before adequately tested

Federal economic incentives to increase safe technology and practices in the

workplace are minimal. While OSHA (one) authorizes small business loans, only 200 such loans have been granted since 1971. Tax incentives are needed to encourage implemented on safe technologies.

In the area of health education, NIOSH has identified 74,000 workers who have been exposed to carcinogens, but lacks the resources to inform these people of the risks they faced or now face. While legally workers have a right to know what hazardous agents they handle many agents are not labeled as ingredients are considered a trade secret.

Monitoring and surveillance, a joint responsible of OSHA, researchers, local public health agencies, employers and labor is incoordinated. After the fact research and discover of the causes and manifestation of occupational disease - emergency surveillance has been the rule.

Preventive health care and other straegies

Clinical services, and safety services, nationally and in Iowa tend to be offered at larger industries. In general, trained of health personnel are in short supply.

To overcome the problems of occupational health and safety which have been proposed, Objectives for the Nation suggest the following (among many others): be accomplished by 1990.

Surveillance system which:

- has ongoing surgey capability to follow-up and health hazard evaluation to determine the etilogy, distribution, and mechanism of cancer and other occupational illness (NIOSH is limited)
- is lied to other health surveys so that usual lifetime occupation is a datum collected
- includes more industrywide evaluation and epidemiological applicable to occupational injuries

Workers informed of health risk so that:

- they receive result of routine and special tests exposures to which are subject
- employers detail preemployment and during employment risk to then

Regulation of safety and health hazard through:

- pre-evaluation use and approval of hazard control plans
- incentives to use safer technology
- expended federal and state inspection force
- when useful standards for federal illnesses such as pain, head and neck injuries

State Policies and Programs

Legislation

The legislature enacted Chapter 88, Occupational Safety and Health in 1972. The Code lists 13 statements of policy "to assure as far as possible every working man and woman in the state safe and healthful working conditions." These policies are to:

- encourage employers and employees to reduce hazards and to institute new and perfect existing safety and health programs
- provide employer and employee rights and responsibilities
- authorize safety and health standards and create a review commission for adjudicatory funtion
- build upon current employer-employee initiative
- provide research
- explore causal connection between degenerative occupational diseases and exposures to harmful substances
- establish medical criteria to ensure employee health
- provide training program
- provide for standards development
- provide enforcement of standards
- provide for reporting of health problems
- encourage labor management efforts
- devote adequate funds for administration of the Iowa OSHA program

Programs and their straegies

OSHA-State regulation

The problems and progress of the regulatory/consultative federal OSHA program directly affects Iowa's Occupational Safety and Health program. Iowa's OSHA program for occupational safety and health must be consistent with and approved by the federal government's. However, as seen in the relatively stable to declining rate of occupational injury, Iowa's program has apparently been effective, gives the obstacles which it faces.

Occupational illness, as opposed to injury as at the federal and state level, remains underreported and underdetected. Circumstances which for the Department of Labor of the federal government produce problems, parallel circumstances for the Bureau of Labor in Iowa. Included in these problems are:

- underfunding (Iowa staff is responsible for over 4,000 industries)
- inadequate research and personnel training (industrial hygienist)
- lack of worker education about health hazards
- lack of economic incentives for industry to produce more safe and healthy environments
- industry's lobbying to weaken OSHAs regulations

Preventive service strategies-screenings and follow-up

Iowa's surveillance system is minimal. Apart from the monitoring of OSHA, which does not include follow-up after employees termination of employment, the involvement of local public health agencies, employers labor and health provides is sporadic. In Des Moines at Armstrong Rubber Company and United Rubber Worker have initiated an employee education/surveillance project. Existence of other such projects in the state is unknown. Employee - Employers job based health programs are intermittent and uncounted statewide, and tend to be located in larger companies.

Economic strategies

Economic incentives to encourage and assure that employers implement safe practices and very safe equipment is as it is insufficient at the national is also insufficient at the state level.

The availability of clinical services to services and occupational disease in Iowa is unknown.

STATUS GOAL 9: DECREASED INCIDENCE OF JOB RELATED ILLNESS ESPECIALLY CANCER AND OTHER CHRONIC DEGENERATIVE DISEASES AND OF JOB RELATED INJURIES.

SERVICE GOAL 9: THROUGH REGULATORY, ECONOMIC, EDUCATIONAL AND SURVEILLANCE, AND TECHNOLOGICAL STRATEGIES MORE SAFE AND HEALTH WORKPLACE ENVIRONMENT.

Objective 1: By 1985, state and federal OSHA develop a system for effective monitoring and regulation of toxic substances before they enter into workplace environment.

LRRA 1: By 1982, DEQ and State OSHA responsibilities defined with regard to Toxic Substance Control Act.

Action Step:

Objective 2: By 1990, 50% of employees informed of potential health hazards through publication of a statement of significant correlation between occupation exposure, premature mortality and disability in Iowa.

LRRA 1: State and Federal OSHA staff will work with researcher at state university and with state and local Health Department of Health to gather information.

Objective 3: By 1985, the characteristics: of the work environment; of monitoring and screening practices; of the adequacy of professionals trained in occupational safety and health determined in Iowa.

LRRA 1: By 1981, state and federal OSHA progams, working with local and state health officials and educational institutions determine data now available.

LRRA 2: By 1981, OSHA determine resources necessary to complete such a inventory of industry, educational institutions and occupational to health services.

Objective 4: By 1985, strengthened occupational health nurse training.

LRRA 1: By 1982, SDOH will inventory nurse training programs in Iowa to determine classes and training offered in occupational health.

LRRA 2: By 1983, recommendation developed by SDOH on specific classes and training experiences required.

Objective 5: By 1985, OSHA, labor unions, employers and employees in high-risk workplaces develop and implement an employee education and risk reduction program.

LRRA 1: During 1981, the ISDH will inventory state for existing employee health programs.

Objective 6: By 1985, federal and state tax incentives to encourage implementation of technology which reduces risks to workers in high risk occupations.

LRRA 1: By 1983, state and fedeal proposals to allow tax exemption and deduct for safety equipment.

References for Occupational Safety and Health

1. Iowa Bureau of Labor, News Release, December 21, 1977

2. Occupational Injuries and Illnesses - 1975, Iowa Bureau of Labor, Des Moines, Iowa, May, 1977, p. 47

3. "Results of the 1977 Occupational Injuries and Illnesses Survey in Iowa", Iowa Bureau of Labor, Des Moines, Iowa, p. 45

4. Ibid., p. 6

5. "Poisons Cast Pall on "Good" Country Life", Gene Erb, Des Moines Tribune, July 27, 1979

Accidents

STATUS

Indicators

- accidental mortality rate by age group by kind of accident
- accidents by precipitating factors

Accidents are the fourth leading cause of death in Iowa. They result in about 1375 or 5% of the approximately 27,500 deaths each year. However, for persons 1-45 years of age accidents are the leading cause of death. Accidents account for 43% of all deaths among Iowans between 1 and 45 years of age. To assume that Iowans should have a life expectancy of 75 years of age, means that 80% of all fatal accidents cause premature death, as 80% of Iowans killed in accidents are less than 75 years of age.

Mortality from auto accidents

Motor vehicle accidents account for about one-half of all accidental deaths. Over 30,000 Iowans are injured and 600-700 killed each year from motor vehicle accidents. During 1978, there were 3.1 deaths (up 1% from 1977) per 100,000 vehicle miles driven. The national rate was 3.41 that year. Alcohol use contributes to 50% of all fatal accidents in Iowa.

In 1978, Iowa youth 19 years of age were drivers in 40.5% of all fatal accidents. In fatal accidents involving drivers less than 19 years of age, 55% were alcohol-related.

Since the initiation of improved automobile safety designs and lower speed limits in the early 1970's, Iowa motor vehicle death rates fell from 320/100,000 persons in 1971 to 281/100,000 in 1976.

In 1978, 12.6% of fatal accidents involved motorcycles. Between 1975 and 1977 when the motorcycle helmet law was briefly in effect, motorcycles were involved in only 9.5% of fatal accidents. Department of Transportation data on cyclists show that:

- 61% are inclined to wear helmets on interstates;
- 55% are inclined to wear helmets on secondary roads;
- 45% are inclined to wear helmets on primary roads; and
- 22% are inclined to wear helmets in cities.

Mortality from accidents at other locations

Other leading locations of accidental deaths in Iowa (1978) are:

Location	% of Total Accidental Deaths
Home Accidents	16% - Mainly from falls and fires
Public Nonmotor	27% - Mainly from falls and unspecified causes
Work Accidents	7% - Mainly from agriculture and construction

Source: Iowa State Department of Health, Vital Statistics
(For more detail on work related deaths and injuries see Occupational Health Section.)

Fatal accidents by kind of injury

While motor vehicles are the leading cause of accidental deaths for all age groups less than 64 years of age, for persons 65 and older, public nonmotor vehicle accidents (primarily from falls) are the leading cause of accidental deaths. Over 50% of the accidental deaths from falls are of persons 75 years of age or older.

Falls accounted for 191 (17%) of the 1,157 accidental deaths in 1978, and was exceeded only by motor vehicle collisions as a cause of accidental deaths.

Fires were another leading cause of accidental death in 1978, 50 (9%) of 1,157 deaths. Drowning at home and in public accounted for 49 (4%) of the 1,157 accidental deaths in 1978.

In Iowa each year 30-40 persons die (about 3% of all accidental deaths) from poisoning. During 1977, 713 poisonings of persons less than 11 years of age were reported by twelve Iowa Hospitals. Aspirin, cough medicine, and children's vitamins were most often the substances of poison.

Firearm accidents accounted for only a very small percentage (1% of 1,157) of accidental deaths in 1978. Although nationally, the majority of all suicides and homocides were through the use of firearms. The number of firearm accidental injuries is unknown for 1978.

Iowans: 14 years of age accounted for 10% of accidental deaths; 15-24 years of age accounted for 24% of accidental deaths; 25-44 years of age accounted for 20% of accidental deaths; 45-64 years of age accounted for 14% of accidental deaths; and 65+ years of age accounted for 29% of accidental deaths.

Factors contributing to accidents

The Center for Disease Control estimates that lifestyle factors such as alcohol consumption, smoking, and not wearing seatbelts, and such environmental factors as poor equipment and project design, nationally contribute to between 82 and 87 percent of all accidental deaths.

SYSTEMS

Indicators

- federal policies by program by strategies
- state policies by enabling legislation by barriers addressed

Federal Policies

Consumer Product Safety Act of 1972 - Established commission to regulate risks to consumers, promote research, and educate consumers to evaluate relative safety of products.

National Safety Council

Department of Transportation

National Highway Safety Administration - Requires states to create a Highway Safety Program and Plan, administers motor vehicle standards, consumer

information, traffic safety, drunk driving, and traffic law enforcement programs.

Federal Highway Administration - Conducts research and development for safe highway design, methods of controlling noise, vibration, pollution and

Department of Commerce

National Fire Prevention and Control Administration - Functions as catalyst and coordinator of data, education and research.

Strategies

Measures suggested by Objectives for the Nation to reduce accidental deaths and injuries at the National level are detailed on the following chart.

HIGH PRIORITY PREVENTION MEASURES

	Education	Technology	Regulation	Economics
MOTOR VEHICLE	Include in school curriculum (K-12).	Improved crash-worthiness; Impact attenuators on roads; Bikepaths.	Automatic restraints; Motorcycle helmet laws Better enforcement of speeding, driving while under the influence, and seat belt laws.	Differential insurance rates.
FALLS	Home safety programs; Seek prompt medical attention.	Building and materials design criteria; Guardrails.	Building and housing codes; Floor covering standards.	Reduce liability; Differential insurance rates.
DROWNINGS	Water safety and swimming training.	Design of swimming pool and environs.	Standards for personal flotation devices; Municipal standards for pools.	Differential insurance rates.
BURNS	Public education; Education of architects and related professionals.	Flame retardant materials; Self-extinguishing matches and cigarettes	Building and housing codes; Smoke detectors.	Differential insurance rates.
GUNSHOTS	Hunter education; Firearms handling education.	Effective trigger safety locks; Non-lethal bullets for target guns.	*	

*A minority of the Work Group members, in recognition of the great number of injuries intentionally inflicted by the use of handguns, recommend, as health professionals, a uniform law to license and control the purchase and possession of handguns, assuming that such regulation will reduce the incidence of these injuries.

State Policies and Programs

Legislation

"Executive Department", Chapter 7.15, Code of Iowa, 1979 - Authorizes the governor to contract for benefits to the State under any Act of Congress for highway safety.

Chapter 80.26, Code of Iowa, 1979 - Authorizes the Commissioner of Public Safety to accept and ad,administer funds, by any Act of Congress for highway safety.

(See Substance Abuse Section, page 81 for details of drunk driving statutes.)

Housing Law, Chapter 413, Code of Iowa, 1979 - Mandates for cities of 15,000 or more and allows smaller cities to enforce provisions for existing "dwellings" which are classified by one family and multi-family dwellings. Provisions for sanitation, safety and health are included.

Related to the housing code, and only indirectly to accidents is Title VII, Public Health, Chapter 135.12, Code of Iowa, 1979 - Sets up a Plumbing Code

Committee to promulgate,rules governing, the installation of plumbing pursuant to other responsibilities designated to the State Department of Health.

State Building Code, Chapter 103A, Code of Iowa, 1979, - Sets up a State Building Code Commission to include provisions for standards or equipment, materials, health and safety protection, energy conservation, and handicapped accessibility for buildlings. Political subdivision may choose to enforce or not enforce the State Building Code.

Programs and their strategies

Highway Safety - Educational and Regulatory Strategies

The Governor's Office for Highway Safety is located in the Office for Planning and Programming. This office oversees and plans for highway safety: in Fiscal Year 1980 $4,543,000 in federal, and $3,359,000 in state monies. These monies are expended in accordance with 18 federal standards established by the National Highway Safety Administration in accordance with the State Highway Safety Plan. Priorities established in the Highway Safety Plan for FY 1980 are:

- continued support for alcohol related accident prevention programs
- strengthening of drunk driving statutes from presumptive drunkenness (if blood alcohol is above .1 of one percent) to define as per se .1 of one percent of alcohol in the blood as drunkeness.
- reenactment of the motor vehicle helmet law (as many as 20 additional lives could be saved annually through such an enactment.)

While many driver education programs for teens exist (and are required if one is to receive a license before age 18) their effectiveness is not specifically known. Regulatory and education strategies to control drunk driving among youth need to be more effective.

The extent and effectiveness of adult drunk driving programs is also not known.

Housing and building code enforcement

To prevent falls, and fires, the second leading cause of fatal accidents: enforcement of local building and housing codes, consumer home safety education, (especially for the elderly), and differential liability and fire protection insurance rates for more safe construction are required. While cities of over 15,000 are required to have housing codes consistent with the State Housing Code enforcement is sporadic. The State Building Code is optional for any political subdivision, but is more widely enforced than the required State Housing Code.

For drownings, differential insurance rates for public pools with fewer drownings and water safety and standards for personal flotation devices are recommendations in Objectives for the Nation.

The State Department of Health's concern with housing is mainly with residential and rental property and the exterior of owner occupied residences. For the most part, the State Housing Code, Chapter 314, Code of Iowa,979, is enforcedy local public health departments. The law provides for local departments, should they choose to enforce them, statutes on public health sanitation and safety requirements for already existing residential and rental property.

Within the State Department of Health, the Health Engineering Section of the

Disease Prevention Division administers the State's responsibilities detailed in the State Housing Code, Chapter 314, and in Chapter 135.11(8), Code of Iowa, 1979. These responsibilities are: to routinely inspect and certify for compliance local health department housing programs; to provide legal interpretation of the housing code to these local departments; and, under special circumstances, to investigate housing code violations. Currently, the Department of Health has no program to routinely inspect and certify for compliance the housing programs of local health departments. And, the Department of Health rarely conducts housing code violations. Although the Department is generally responsible for public health and hygiene, Chapter 135.11, Code of Iowa, responsibility for enforcement of the Chapter 314, Code of Iowa, rests with local departments of health.

The State Building Code, also enforced at the local level, complements the State Housing Code. The former applies only to the construction of new buildings.

The effective implementation by local health departments of the State Housing Code is hindered by the fact that the code is outdated.

Currently the Code applies only to the communities of over 15,000 and these communities can enforce the Code only one mile beyond their boundaries. For County and District Health Departments and for small communities the "applicability" provision of Chapter 314 makes enforcement difficult. For example, the Des Moines Polk County Health Department can enforce the Housing Code in Des Moines, and in part of Urbandale within one mile of Des Moines. But, the Polk County Board of Health cannot enforce the Code in any community of less than 15,000 population which is greater than one mile from the Des Moines city boundary. Small county health departments with civil divisions of only less than 15,000 have no authority to enforce the State Housing Code at all.

Several years ago the State Health Department and local health departments worked on some revision to Chapter14 and its administrative rules, only to have the legislature rescind an earlier law requiring the Department to update the chapter. While the chapter remains in need of amendment, the legislature is now considering legislation to require an update to the Code.

In conjunction with updating the Iowa Housing Code, an update in the State's Plumbing Code, and Rules, and additional provisions for integrating building codes and housing code responsibilities at the State level ought to be a part of legislative action.

STATUS GOAL 10: REDUCE ACCIDENTAL FATALITIES AND INJURIES TO IOWANS.

SERVICE GOAL 10: REDUCE THE NUMBER OF FATAL MOTOR VEHICLE CRASHES EACH YEAR BY FOUR PERCENT; REDUCE THE INJURIES DUE TO MOTOR VEHICLE CRASHES BY FOUR PERCENT,THROUGH 1983. (STATE HIGHWAY SAFETY PLAN)

Objective 1: By 1985, reenactment of the state motorcycle helmet law.

(See additional objectives under substance abuse.)

Objective 2: By 1985, all mothers leaving hospitals with newborns aware of the advantages and given follow-up education to encourage use of infant car restraints.

Objective 3: By 1982, recommendations developed and implemented to prevent fire, falls and drowning in the state.

SERVICE GOAL 11: INCREASED AVAILABILITY OF RENTAL HOUSING WHICH IS NOT DETRIMENTAL TO THE HEALTH OF IOWANS.

Objective 1: By 1984, a revised Chapter 413, the State Housing Code, and regulations passed and approved by the State Legislature.

LRRA 1: The State Department of Health, Health Engineering Section, with other State agencies and local health departments' help will submit suggested revisions of the State Housing Code to the State Legislature by 1981.

SRRA 1: The State Department of Health will contact local health departments to gain suggestions and support for code revisions by 1980.

LRRA 2: The State Department of Health will develop with the Building Code Commission, in conjunction with revising the housing code, a proposal to better integrate housing and building code enforcement.

Objective 2: By 1985, all local health departments in SMSAs enforcing the revised State Housing Code.

LRRA 2: The State Department of Health will set up a task force of local citizens and public health officials to study the problems of substandard rental housing in Iowa, and the enforcement of the housing code by local departments of health.

(For objective on the plumbing code see page 139.)

Infectious Agent Control

STATUS

Indicators

- morbidity rates per 10,000 persons

Infectious agents are bacterial, viral or other microbial agents which pass from food, animals or people to, people, and cause "communicable" disease. Communicable diseases which are immunizable and commonly treated through immunization before exposure are analyzed beginning on page in a separate section. This section discusses only nonimmunizable communicable diseases (with the exception of rabies, an immunizable disease). Non-immunizable communicable diseases are prevented through public health efforts such as by clinical health care services. Sexually transmitted diseases are separated and discussed in a separate section, beginning on page .

Nonimmunizable communicable diseases important to Iowans are:

Chicken Pox	Rheumatic Fever
Common Cold	Scarlet Fever
Encephalitis	Salmonella
Gastrointestinal Virus	Streptoccal
Mononucleosis	Tuberculosis

Morbidity rates

Incidence Rates of Nonimmunizable Communicable Diseases, Cases Per 10,000

	1975		1977			1978	
Disease	No.	Rate	No.	Rate	Rate/10,000	No.	Rate/10,000
GIV	25,457	80		24,640	86		
Streptococcal	10,354	35.9		12,300	43		
Chicken Pox	9,507	33		8,261	29	6,978	
Hepatitis	295	1.02		239	.83	300	
TB	213	.74		174	.34	283	
Mononucleosis				1,122		1,157	
Rheumatic Fever				33		26	
Salmonellosis				293		210	
Encephalitis				4		37	
Scarlet Fever							
Rabies				134		147	
Shigellosis				81		85	
Reyes Syndrome						9	

"Some 291 million illnesses from infectious disease occurred in the United States in 1975, more than one for every person. Because of them at least 156 million workdays are lost and the cost for treatment and lost productivity is estimated at $24 billion annually. (1)

The State Department of Health has identified the following priority problems in the area of surveillance of infectious disease.

All zoonotic (transmissable from other animals to people) diseases including salmonellosis, trichinosis, rockmountain spotted fever, Q fever, tularemia, histoplasmosis, psittacosis, encephalomyelitis, ringworm, rabies and tuberculosis. Emergency outbreaks of such diseases as Reyes Syndrome and Guillain-Barre syndrome are also of priority concern to the State Department of Health.

Private wells which are poorly constructed may lead to infectious agent contamination, and milrate contamination. Typhoid, cholera, sheallosis, and other gatrointestinal disorders, as well as hepatitis and methemoglobinemia can result from drinking water contaminated with bacteria or viruses.

SYSTEM

Indicators

- federal policies by enabling legislation by program strategies
- state policies by enabling legislation by barrier addresses

Federal Policies

All monies spent on infectious diseases which are addressed in this section come from state rather than federal appropriations. Specific federal programs for control of the infectious diseases are unknown.

State Policies and Programs

Legislation

Chapter 135.11, State Department of Health - Code of Iowa, 1979 - Gives the Commissioner of Health supervision over public health, responsibility to make investigation of causes of diseases and epidemics.

Chapter 135, State Board of Health, Code of Iowa, 1979 - Creates State Board of Health as Policy making body to State Department of Health; is to advise the Department on its responsibilities relative to zoonotic and communicable disease, housing surveillance, vital statistics...

Chapter 137.6, Local Boards of Health, Code of Iowa, 1979 - Gives to local boards of health authority to enforce state health laws and lawful orders of the State Department.

Chapter 139, Contagious and Infectious Disease, Code of Iowa, 1979 - Requires: physician reporting of certain diseases; local boards of health to set orders when an infected person poses threat to public health; immunization of school age children; counties to pay for services when residents are unable to pay for the same.

Chapter 163, Infectious and Contagious Diseases Among Animals, Code of Iowa, 1979 - Gives to the Department of Agriculture power to make rules to suppress infectious and contagious diseases among animals.

Chapter 164, Eradication of Bovine Brucellosis

Chapter 165, Eradication of Bovine Tuberculosis

Chapter 166 and 166B, Hog Cholera Virus and Serum, Eradication of Hog Cholera

Chapter 166C, Aujeszky's Disease - enables Department of Agriculture to control spread of certain animal diseases.

In reference to infectious and toxic agents, the Department of Health is also to:

- inspect sanitary conditions in any locality in the state;
- enforce and establish plumbing code for Iowa cities;
- supervise and enforce State Housing Law (Ch. 413, Code of Iowa, 1979);
- exercise jurisdiction over the disposal of dead bodies;
- assure eyeglasses for retail sale are impact resistant (Ch. 135, Code of Iowa, 1979);
- inspect, and license mobile home parks (Ch. 135D, Code of Iowa, 1979);
- survey and certify all Grade A milk supplies (Ch. 192, Code of Iowa, 1979);
- oversee the removal of abandoned refrigerators (Ch. 192, Code of Iowa, 1979);
- issue operation permits and inspect migratory labor camps (Ch. 138, Code of Iowa, 1979);
- issue permits for operation and inspect construction of municipal and school swimming pools (Ch. 15, Iowa Administrative Code);
- license and inspect burial preparation sites (Ch. 156.10, Code of Iowa, 1979);
- inspect grave sites (Ch. 156.10, Iowa Administrative Code);
- issue permits for and inspect mass gatherings (Ch. 19, Iowa Administrative Code);
- approve application and develop sanitation rules for the Iowa Department of Social Services for children's boarding and foster homes (Ch. 237, Code of Iowa, 1979);
- develop sanitation rules for the Iowa Department of Social Services for day care centers (Ch. 237A, Code of Iowa, 1979);
- approve individual sewage treatment systems (Ch. 12, Iowa Administrative Code);
- represent State Department of Health: for radiological and other disasters along with Department of Environmental Quality, on the Great Lake Upper Mississippi River Board and the National Conference of Interstate Milk Shipments;
- provide consultation on insect and rodent control;
- inspect private water supplies.

Programs and their strategies

Preventive services and technological strategies

Surveillance and control activities of the state departments of agriculture and health generally include

- case finding or findings of significant exposures
- reporting of cases by school, industry, pysicians
- analysis of data
- control of souce of problem

Within the Disease Prevention Division of the State Department of Health, the Veterinary Public Health Section, the Tuberculosis Control Section, and the Infectious Disease Control section carry out infectious disease surveillance.

Zoonotic disease control

The Veterinary Public Health Section of the State Department of Health keeps track of more than one hundred diseases of animals that are transmissible to man (zoonoses). Some of these diseases are constantly present in Iowa and others occur less commonly. Various species of domestic, wild and pet animals serve as reservoirs for these diseases. With the large domestic livestock population in the state there is a degree of occupational exposure to the diseases by farmers who raise the livestock and by workers who process them. Zoonotic diseases that occur in Iowa include salmonellosis, psittacosis, rocky mountain spotted fever, Q fever, tularemia, histoplasmosis, trichinosis, encephalomyelitis, ringworm, brucelloses, toxoplasmosis, actinomycosis and others. As the communicable diseases affecting only man are brought under control, the zoonoses become relatively more significant to human health. Many of these diseases in man resemble other disease and delays in diagnoses have been observed in cases of brucellosis, oculoglandular tularemia, psittacosis, and sarcoptic scabies. Delays in diagnosis often cause increased severity and prolonged duration of the diseases and delay initiation of measures to prevent other cases.

A continuous surveillance system of zoonotic disease is maintained. For certain of the zoonoses such as rabies and encephalitis the surveillance is primarily on the animal cases of the disease reported to the Department. For others such as salmonellosis or trichinosis the system applies to human cases. For others such as brucellosis both human cases and animal infections are included. During Fiscal Year 1978, $34,973 was appropriated by the State Legislature for zoonotic disease control through the State Department of Health.

Epidemiologic investigations are conducted where the surveillance procedures indicate this is necessary. The extent of the investigation varies greatly depending upon several factors such as the disease itself, reservoir, animal species, extent of the problem and others. The investigation may be limited to data collection by telephone or correspondence on an individual case or to full scale epidemiological investigations lasting years in some instances.

Tuberculosis control

The Tuberculosis Section of the State Department of Health efforts are aimed at three important aspects of prevention and control, i.e., surveillance, containment, and assessment. Staff includes the thirteen health representatives which serve the entire Division. Surveillance and a register of T.B. cases in all 99 counties is maintained. Anti T.B. drugs were supplied to 200 patients during 1977.

In fiscal year 1978 the Division of Disease Prevention spent $59,000 in T.B. surveillance, control and prevention, $48,000 in the area of veterinary public health, $132,000 for its immunization program and $164,000 in administration and epidemiology, in addition to the monies spent on venereal disease program.

Private water supplies and well construction

According to the 1970 census there were approximately 250,000 private or individual wells in the state at the time, which represented approximately one-third of Iowa's population. Since 1970 the number of private wells probably has increased by at least ten percent. Private well owners may request an analysis of their water, although the potability of water from a private water supply should never be estimated on the basis of a single water sample as this

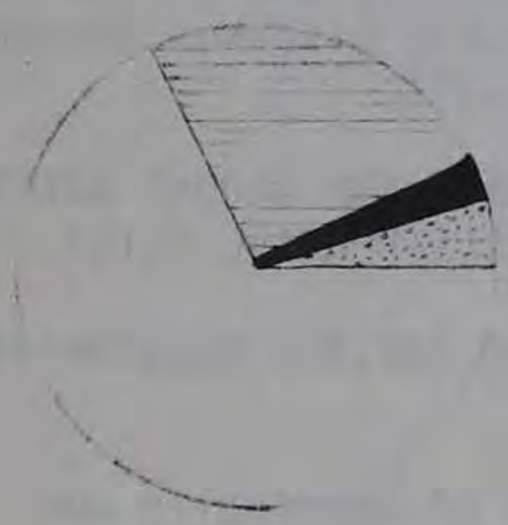
can only give an estimate of the problem. There are estimated to be about 4,000 community water supplies in the state. Seven hundred are municipal and 3,000 are in such places as schools, gas stations and mobile home parks. These community water supplies serve about two-thirds of the state's population.

In 1975, 10,343 water samples from private wells were submitted to the state hygienic laboratory for examination. While 41,373 samples were submitted from community water supplies for examination in 1975, community water serve about two-thirds of the state's population. Private water supplies about one-third of Iowa's residents.

TABLE 3

WATER SAMPLES SUBMITTED TO THE STATE HYGIENIC LABORATORY, FY 1975 (3)

Source of Water Samples Analyzed for Coliform Bacteria



68% Community Water Supplies

25% Private Water Supplies

4% U of I Water Supply

3% Swimming Pool

41,373 Samples
28,134 - Community
10,343 - Private

Distribution of Water Samples Containing Unacceptable Levels of Coliform Bacteria

75% Private Water Supplies

23% Community Water Supplies

2% Other Supplies

5,793 of 41,373 Total Samples
1,332 - Community
4,345 - Private

Table 3 indicates that in 1975, while private water supplies were only 25% of the water samples tested for coliform bacteria, private supplies represented 75% of the water samples with unacceptable levels of coliform bacteria. Of the 10,343 private water supply samples which were examined, approximately 35% were unacceptable from the standpoint of bacterial or nitrate contamination. The percentage of samples with unacceptable levels of nitrates and bacteria varies county to county, and ranges from 15% to 75%. Primarily, contamination is tied to the type of constrution, although nitrate contamination is also linked with shallow ground water sources.

And these test results do not necessarily paint the whole picture, as many wells can be contaminated with bacteria during periods of high runoff, but if the samples are taken in the summer, bacterial contamination would not be indicated by a lab test at that time. Additionally, poorly constructed wells may allow toxic substances to seep into the well, contaminating the water supply not only of users of the well, but potentially of all people who tap into the same aquifer.

STATUS GOAL 12: REDUCTION OR ERADICATION OF INCIDENCES AND EPIDEMICS OF ALL NON-IMMUNIZABLE INFECTIOUS DISEASES AND ZOONOTIC DISEASES.

SERVICE GOAL 12: CONTROL OF INFECTIOUS NON-IMMUNIZABLE AND ZOONOTIC DISEASES THROUGH EPIDEMIOLOGIC SURVEILLANCE.

Objective 1: By 1985, prevent cases of zoonotic diseases in humans through continuance of surveillance programs at state and local health departments.

Objective 2: By 1985, an improved disease reporting system for certain non-immunizable infectious and zoonotic diseases through local and state public health officials.

SERVICE GOAL 13: BACTERIALLY AND CHEMICALLY SAFE SURFACE AND GROUND WATERS, AND DRINKING WATER AVAILABLE TO ALL RESIDENTIAL SITES.

Objective 1: By 1985, 95 percent of the estimated 240,365 households which have private water supplies:

- informed of the dangers and signs of chemically and bacterially unsafe water, and
- aware of the appropriate sources to analyze and solve complaints and conditions relative to water quality and safety.

SRRA 1: By July 1, 1981, have proposed legislation that clarifies that the Department has responsibility for establishing minimum construction standards for on-site waste treatment systems and small water supplies.

SRRA 2: By January 1, 1980, have resubmitted proposed legislation for state-wide certification of water well contractors.

SRRA 3: By 1982, a media campaign directed at well and septic tank users.

Objective 2: By July 1, 1981, have established a consultation program relative to hazardous or toxic chemicals as they relate to the environment and public health.

SRRA 1: Consumer Product Safety transferred from the State Department of Agriculture to Health Engineering.

SRRA 2: By July 1, 1981, have permanent budget and new legislation allowing routine, surveillance and monitoring of public swimming pools.

SRRA 3: By 1982, have completely revised the State Plumbing Code to develop a single code for the state. The State Building Code Office has a separate code used for approving federal monies used in construction.

Sources

1. Healthy People, PHS, DHEW, p. 117

Fluoridation of Water

STATUS

Indicators

- Etiology of cavities by factors contributing to cavities

About 98% of the U.S. population has had at least one cavity. By the time children in the U.S. are 17 years of age, each, on the average, has nine permanent teeth with cavities. More than 11% of the U.S. population lose all of their teeth, mainly from denatl caries and gum disease. (1)

Caries Formation

"Dental caries develop beneath dense bacterial masses that are tightly adherent to the tooth surface and are termed dental plaque...Plaque forms as bacteria attach to the pellicle (a salivary in orgin layer of material on teeth)...evidence to date suggests caries in fissures on teeth, caries on the root surfaces or periodontal (gum) diseases may all be associated with plaques (formed by) different (kinds of) bacteria...(and) a plaque PH of 5.5 or lower." (2)

Factors which influence plaque acidity are:

- amount of carbohydrates consumed
- amount and composition of bacteria
- saliva production
- fluoride
- availability of other trace elements in water (3)

In general, studies have shown that carbohydrates consumed during regular meals do not produce as many caries as does that same amount of carbohydrates consumed between meals. This is thought to be the case in part at least to increased salivation during meal eating.

Studies of armed service recruits during World War II lead to the discovery that naturally fluoridated drinking water (of .7-1.2 ppm of F-ions) yielded lower rates of dental caries. Drinking water fluoridation reduces dental caries by 50-70%. (4)

Methods of Fluoridation/Caries Reduction

- adding fluoride to drinking water 50-70%
- topical tooth application 25-80%
- fluoride mouth rinses 25-33%
- fluoride tablets 20-30%
- fluoride dentifrices 17-38% (in areas with fluoridated water and without)

School based water fluoridation in areas where community water supply fluoridation is not practical has reduced caries up to 40% among school children.

Of all the methods of achieving caries resistance through fluoride, community water fluoridation is the most cost effective.

However, about 40% of the United States citizens drinking from public water supplies do not have fluoridated water In Iowa the rate is .

SYSTEM

Indicators

- Federal policies by program by barrier addressed
- State policies by program by barrier addressed

Federal Policies

The following is taken from Disease Prevention and Health Promotion (1978).

> Departmental (DHEW) activities to prevent dental problems ($32 million) include research into the development of new agents, sealants, and vaccines to prevent dental caries; prevention of periodontal disease, including professional prophylactic services; an d prevention of oral cancer, including studies to facilitate early detection. Health Service Administration (HSA) and Center for Disease Control (CDC) provide or encourage delivery of dental disease prevention services and information. Community water fluoridation, school water fluoridation, and other fluoride supplements are supported through federal grants to states. Alternative programs could be provided through families and schools. Preventive dental services could be required under medicaid, and certain preventive services could be provided in schools.

Objectives for the Nation identifies the following barriers to serving that 40% of the U.S. population or 72 million persons who have less than optimal levels of fluoridation.

- community inaction - stemming from the lack of knowledge on effectiveness and safety
- financial inability
- improper surveillance - many communities with fluoridated systems are maintained at less than optimal levels
- antifluoridationists - who through unsubstantiated claims and political actions have created an atmosphere of doubt
- cuts in federal support for fluoridation, the Public Health Services Program included public education, promotion and technical assistance.

State Policies and Program

Legislation

Chapter 153, "Practice of Dentistry", Code of Iowa, 1979 - limits practice of dentistry to licensed dentists. The services to be performed by dental hygienists are limited in this chapter to "...educational, therapeutic, and preventive (services) which attain or maintain optimal oral health as determined by the board of dentistry."

Programs and their strategies

Dental Health Program (5)

The Dental Health Section of the Division of Personal and Family Health provides a variety of preventive dental health services which assist the Maternal and Child Health Section in its comprehensive health care efforts. Programs carried on by the Dental Health Section include the Community Water Fluoridation Program

and School Dental Health Program, which incorporates the Topical Fluoride Demonstration Project. In addition to these activities, the Director of the Dental Health Section directs and monitors the Dental Health Project of the Program of Projects.

In an effort to improve the quality and quantity of dental care available to mothers and children, the Dental Health Section provides technical assistance, monitoring, and consultation to the dental components of the Children and Youth Project, Maternity and Infant Care Project, Mason City Maternal and Child Health Center, and other maternal and child health centers throughout the State.

The School Dental Health Program provides basic dental health education to children at the elementary school level and also includes the topical fluoride rinse program as a dental caries preventive. School Dental Health Programs are available as either team programs or small scale programs, and differ only in their method of delivery. Team programs utilize three dental hygiene students from the University of Iowa, assisted by the school nurse or classroom teacher, who are supervised by a public health dental hygienist from the Dental Health Section of the Division of Personal and Family Health. Content of the programs consists of the presentation of basic dental health facts on the causation and prevention of dental disease, instructions on tooth brushing and use of dental floss, and the initiation of a fluoride mouthrinse procedure, which requires parental permission. Flossing is taught to children in the upper grates only, due to inadequate manual dexterity in the lower grades. Some children may receive dental screening, although not a complete dental examination.

After screening, the school nurse receives names of children for follow-up with the parents and family dentists. A total of 27,720 youngsters received the fluoride rinse during 1978-79 school year. This year's objective is to provide the fluoride mouthrinse program to 33,000 children.

The small scale programs are recommended for smaller elementary schools or for a few grades in any school. Although less structured than the team program, content of the program is the same and differs only in that the program explanation and teacher/nurse instruction is conducted by the Dental Health Section's public health dental hygienist. Both programs are designed for first and second grades and either fourth, fifth, or sixth grades. Brushing and flossing are followed up in the classroom for a period of six weeks to allow for reinforcement of the instruction given by the dental hygienist. The fluoride rinse procedure is carried out weekly the remainder of the year. Dental health education was provided to 32,885 children during the 1978-79 school year.

Since a limited number of schools can be reached in a school year by the State staff, the programs can be carried on in succeeding years by the school nurse and/or classroom techer. Most of the materials and supplies are provided at no cost to the schools upon request.

For Fiscal Year 1980, there will be a continued effort to promote community water fluoridation, the most effective method for preventing dental caries. At present, 86% of the population served by public water supplies in Iowa drink water from supplies using natural or adjusted fluoridation. However, 276,000 people in 422 communities are served by public water supplies with deficient levels of fluoride.

The Community Water Fluoridation Program has as its goal the adjustment of the fluoride-deficient public water supplies to reduce the prevalence of dental

caries in the population. In October 1979, the Dental Health Section was awarded a Community Water Fluoridation Grant from the Center for Disease Control, Public Health Service. This grant will provide funds to assist those communities of 1,000 or more population in implementing and maintaining water fluoridation systems. The grant will pay all reasonable costs involved in the design, purchase, installation of fluoridation equipment, and the first year's chemical costs. Currently 68 cities are eligible for this grant program.

The Dental Health Section continues its monitoring program to insure that cities with fluoridated water systems maintain the optimum level of fluoride at all times.

A "Dental Health Center Project" in Linn County in Fiscal Year 1976 established a dental health center at St. Luke's Methodist Hospital in Cedar Rapids, where a child health conference and family planning project are also situated. The project's goal is to provide high quality, comprehensive dental care to children from birth to age 18 of low income families who cannot afford the services of a private dentist and who would otherwise not receive adequate dental care. Approximately 1,100 children will be served by this project in FY1980.

Major funding is provided by the U.S. Department of Health, Education, and Welfare, through Title V of the Social Security Act for Maternal and Child Health Services.

Children's Dental Health Project, Des Moines Health Center

A Program of Projects

The goal of the Children's Dental Health Project is to provide quality dental care and prevention for the children of low income families in Polk, Warren, Madison, and Dallas Counties. Dental screening, diagnostic and preventive services are provided to all children of preschool and school-age, 0-18. Treatment, correction of defects, and aftercare are available only to children who would otherwise not receive such services because they are from low income families or for reasons beyond their control.

During FY1980 it is anticipated that 2,900 children will receive services through the Children's Dental Health Project.

Dental health services are also available through two Child Health Centers and two Maternal Health Centers in Iowa.

The Children and Youth Project of Iowa provides comprehensive health maintenance services to low-income children from birth through age six and their siblings to age eighteen, residing in the project's target area of Scott County. Diagnostic, preventive, and remedial dental care was provided 360 eligible children served by the project during this past year.

Community Opportunities, Inc., conducts child health centers in nine counties in west central Iowa which offer dental care as part of their health maintenance services to indigent children through age sixteen. Dental care is provided in the private offices of participating dentists who are reimbursed by the project.

The Maternity and Infant Care Project serves pregnant women and infants up to 12 months who reside in Appanoose, Davis, Jefferson, Keokuk, Lucas, Mahaska, Monroe, Van Buren, Wapello, and Wayne Counties. Dental care is provided by

local dentists as part of the comprehensive prenatal and postpartum care. Approximately 240 women will be provided dental care through this project.

The North Iowa Community Action Organization Maternal Health Center provides a limited amount of dental care to low-income pregnant women served by the project through local dentists. This project serves nine counties in north central Iowa.

The Pedodontic Services for Indigent Handicapped Children Project is located at the University of Iowa. This projnct offers dental care to children throughout Iowa up to the age of 16 who are developmentally handicapped or children with handicapping dental problems. It is estimated that 100 children will be served.

STATUS GOAL 14: ALL IOWANS WITH GOOD ORAL HEALTH

SERVICE GOAL 14: ECONOMIC AND EDUCATIONAL BARRIERS TO FLUORIDATION OF COMMUNITY WATER SUPPLIES AND TOPICAL SCHOOL BASED APPLICATION ELIMINATED.

Objective 1: By 1985, Dental health education and dental health services increased by 25% to children and low income, pregnant women.

Objective 2: By 1982, Community water-fluoridation available to 93% of Iowans served by public water supplies.

SRRA 1: SDOH will identify funding sources.

Objective 3: By 1982, Fluoride rinse programs for all children using private water supplies.

LRRA 1: Iowa State Department of Health will develop a plan which includes agreements with the State Department of Public Instruction to provide for curriculum, staff requirements and costs.

SRRA 1: Iowa State Department of Health will evaluate participation and effectiveness of current programs.

SRRA 2: Iowa State Department of Health will identify priority areas based on need.

References

1. Illowa Health Systems Plan 1980-1982, p. 91.

2. Healthy People The Surgeon General's Report on Health Promotion and Disease Prevention, "The Present and Future Prospects for the Prevention of the Principal Oral Disease", Forsyth Dental Center, Boston, Mass., p. 84.

3. Ibid., p. 85.

4. Ibid., p. 94.

5. Iowa Health Plan for Women and Children, pp IV 13 - IV 15.

Pregnancy and Infant Care

STATUS

Indicators

- maternal, infant, neonatal, perinatal and fetal mortality per 1000 live births
- risk factors for mortality by kind
- congenital malformation role per 1000 live births

Infant mortality

In the United States in the past few years, the rate of infant mortality has stabilized at (14 per 1000 births), after steadily declining through most of this century.

In Iowa, the rate of infant mortality declined between 1971 and 1978 from 17.5 per 1000 live births to 12.5 per 1000 live births. Other indicators, perinatal, neonatal, and fetal deaths declined at these rates between 1971 and 1978:

Deaths	1978	1971
Perinatal	17/1000	
Neonatal	8.8/1000	13.7/1000
Fetal	8.1/1000	10.6/1000

Maternal mortality

During the 1930's, one in every 210 women in Iowa died in childbirth; whereas during the 1970's one in every 11,250 women died (1978 rate = .2 per 1000 live births).

These declines in infant and maternal mortality are attributable to increased availability of regionalized prenatal and postnatal maternal and child health services; supplemental food programs; direct income transfer programs which boost family incomes; and family planning services, as well as a stabilized birth rate.

Mortality risk factors

Despite declining rates of infant and maternal of mortality, many high risk pregnancies still need to be identified early so that appropriate care and support can be given.

Early identification increases the likelihood of a positive health outcome for those prospective mothers and infants who are at risk. Factors of high risk for mortality or morbidity of pregnant women and infants include:

- race (minorities)
- previous perinatal morbidity or mortality (4th parity or higher)
- age of mother (under 20 - over 35)
- eucational level of mother (less than high school)
- income level of mother (low income)
- presence of previous maternal chronic conditions (diabetes, hypertension, kidney disease)

- trimester in which care was begun (second or third)
- prematurity or birthweight (less than 2,500 grams or ____ weeks gestation)
- substances used (high alcohol ingestion or heavy smoking)

Low birth weight

Low birth weight, 2500 grams or less (5 lbs. 8 oz.) is highly related to infant mortality and morbidity. The risk of death in the first year of life is 17 times greater among infants weighing 2500 grams or less than the risk among infants weighing more. Infants of low birth weight are 20 times more likely to die before their first birthday than are other infants. Congenital anomalies, mental retardiation, growth and development problems, blindness, autism, cerebral palsy, and epilsey occur at higher rates in low birth weight than in normal birth weight infants. Healthy People the Surgeons Generals Report on Health Promotion a Disease Prevention Background Papers identifies the factors of inadequate prenatal care, socioeconomic status, poor nutrition, and alcoholism as predictors of low birth weight.

Recently, perinatologists have been even more concerned about perinates labeled as being very low weight, which is 1,500 grams (about 3lbs. 4 ozs.) or less at birth. More than half of the infants that die during the first 28 days of life weigh less than 1,500 grams at birth. 1 Structural birth defects occur in more than 30 percent of the infants weighing less than 2,000 grams at birth. Such defects occur in only six percent of the normal weight babies (over 2,500 grams). (2)

In 1978, in Iowa, 2356 or 5.3% of newborns, weighed 2,500 grams or less: 460 or 1% of these newborns weighed 1,500 grams or less. Nationally, about 7% of all infants are of low birth weight. Significantly, about 20% of the infants weighing 2,500 grams or less in Iowa are born to mothers under the age of 20. Infants born to teenage mothers are four times more likely than other infants to be of low birth weight. In Iowa in 1978, while only 13% of all births were attributable to teenagers. But over 17% of the 362 fetal deaths that year in Iowa occurred in the 15-19 year old age cohort. (3)

Age of mother

Mothers at the other end of the childbearing span, those over the age of 34, are also high risk. In 1978, over seven percent of all fetal deaths in Iowa were to mothers in this age group. When combined with the 30-34 age group, this percentage increased to over 20 percent: While women over 30 accounted for only 16.7 of all live births in 1978.

As the table below this paragraph shows, the risk of having a child with Down's Syndrome is low for young women, but increases greatly for women over the age of 35. The risk similarly increases for other chromosome abnormalities as well. (4) If all pregnant women over age 35 were tested by amniocentesis (between the fourteenth and sixteenth week of pregnancy), the incidence of Down's Syndrome could be reduced by 57 percent. If all women over age 30 were tested, the incidence would be reduced by 73 percent. (5) As more women are choosing to wait until they are over thirty to have their first child, the percentage of births in Iowa to women 35 and over has increased from ____ to ____.

Age of Mother	Risk of Having Child With Down's Syndrome
Below 24 years	1 in 2,000 births
30-34 years	1 in 800 births
35-39 years	1 in 300 births
40-44 years	1 in 80 births
Over 45 years	1 in 20 births

Source: Regional Genetic Counseling Service, University of Iowa

During the 1970's, the rate of congenital malformation per 1000 live births fluctuated from a high of 19.9 per 1000 live births in 1973 to a low of 15.3 in 1977. Each year in Iowa over 1,800 or 4% of all infants are born with a birth defect or genetic disorder.

Income

Low income is recognized as an important factor affecting health status. It may be of particular importance to the pregnant woman who needs prenatal care and who has additional nutritional needs. It is estimated that about 6,500 or about, 14.5% of women giving birth each year have incomes below the poverty level ($6,506 in 1976). About 20% or 8,900 women giving birth each year have incomes at or below 150% of the poverty level.

Nutrition

Nutrition is a major component of preventive health and is especially important for women during the childbearing years. The expectant mother's nutrition affects her unborn child since the growth needs for the fetus are drawn from the mother's own tissue reserves and food intake. Research now has generally confirmed that manutrition in the mother either before and/or during pregnancy may result in the baby being mentally retarded.(6) Other problems which can be attributed to inadequate nutritional intake are: fetal low birth weight, fetal growth retardation, obesity, iron deficiency and dental caries.

About 13.5% or 96,847 families have incomes at or below 125% of the poverty level. In Iowa, about 150,300 children or 15.5% of all children are of families with incomes at or below 125% of the poverty level. These children of low income families are at risk of having high rates of nutrition related morbidity and mortality.

Sudden infant death syndrome (SIDS) is associated with a combination of factors - including maternal age, blood group, urinary infection, birth order, duration of labor, and smoking. Monitoring of at risk infants may be one method of decreasing SIDS, which is leading cause of death among infants. Of infants dying in 1979, 15% or 78 infants died of SIDS in Iowa.

Trimester inwhich care begins

In 1976 in Iowa, complication of pregnancy were recorded for nine percent of the births, and complications of labor and delivery were recorded for 23 percent of the births. 7 For that year, 19% or 7246 pregnant women began receiving prenatal care after the first trimester of pregnancy or received no prenatal care at all. In the case of unmarried women care began after the first trimester for over 47% of all pregnant women.

SYSTEM

Indicators

- federal policies by enabling legislation by program by strategies
- state policies by enabling legislation by program by strategies

Federal Policies

Social Security Act Title XIX - establishes guidelines and federal matching monies for states to establish medicaid programs for low income persons.

Social Security Act Title XX - establish guidelines and federal matching monies for non institutional social services; requires states to develop annual plans for distribution of monies.

Social Secuirty Act Title V - gives to states monies to establish program for special screening and clinical services for visual, hearing, skeletal or chronic diseases, impairments or deformities in persons 21 years of age and younger.

Child Nutrition Act of 1966 was amended 1978 - gives to states monies to assess health needs and give special supplemental food tickets to pregnant women and children.

Services and estimated expenditures by DHW branch agencies are outlined below. (8)

Health Services Administration

Preventive services were estimated to total .....$570,000,000 or 36% of the Administration's total 1977 budget.

- In the Bureau of Community Health Services (BCHS) grant programs provide outreach, screening and health counseling (Community and Migrant Health Centers; Maternity and Infant Care and Children and Youth projects; National Health Service Corps sites; Health Underserved Rural Area projects).

- In the Indian Health Service (IHS) is the primary health resource for approximately 700,000 American Indians and Alaska Native people.

Center for Disease Control

Preventive services were estimated to total .....$86,000,00 48% of the total centers total budget for 1977:

Services funded include:

- epidemiological and some clinical research, dissemination of information; diagnostic aid
- pilot community programs in diabetes control
- grant programs providing disease prevention services for specific problems--e.g., immunization; veneral disease
- programs for disease surveillance and technical support

National Institutes of Health

Preventive services are estimated to total .....$270,000,000 or 11% of the NIH total budget in 1977.

- research and demonstration activities related to primary and secondary prevention of disease and disorders by 11 Institutes and seven supporting divisions, organized to type of condition

In prenatal and perinatal care ($158 million), NIH research is aimed at prevention of complications of pregnancy, particularly in adolescents.

Health Care Financing Administration

Preventive services in 1977 were estimated to .....$170,000,000 or total less than 1% of the agency total budget in 1977.

Programs include:

- medicaid covers well-child and well-adult care, family planning, and some other preventive services in the course of matching State expenditures for reimbursing providers of health services to the poor
- the EPSDT program for Medicaid eligibles under 21 pays for outreach, child health screening and follow-up.

Office of Human Development Services

Preventive services in 1977 were estimated to total ....$1,166,802,677 or 23% of the office total budget.

- Administration for Children, Youth, and Families. ACYF supports Head Start programs to provide developmental services, research and development, information and referral, career development, technical assistance, and training; Research Demonstration projects to support the family; provides grants and contracts to improve family activities for prevention, identification, and treatment of child abuse.

Suggested Strategies
Objectives for the Nation include the following priorities:

- education and community based services available without regard to social, ethnic, or geographic barriers
- maternal and child health programs including family planning services
- nutrition education and food supplement from first trimester
- curtailed smoking during pregnancy
- regionalized care system

Objectives included in the Objectives for the Nation are by 1990:

- a infant mortality rate of no more than 9 per 1000 live births
- a perinatal mortality of no more than 5.5 1000 live births
- a maternal mortality of no more than 5 per 100,000 births
- 90% of pregnant women receiving care during the first trimester
- rates of low birth weight babies for low socioeconomic groups within 6% of national average

- assurance of safe intrapartum care, and screening and acceptable treatment of all neonates

State Policies and Programs

Legislation

Chapter 136A "Birth Defects Institute," Code of Iowa, 1979: sets up an institute to conduct research and support clinical counseling services related to the prevention and care of birth defects.

Chapter 255, Medical and Surgical Treatment of Indigent Patients, Code of Iowa 1979 - allows counties to refer indigent patients to the university hospital for care commesurate to their needs.

Chapter 140.11, Veneral Disease Control, Code of Iowa, 1979 - requires syphllis blood test for all pregnant women.

Programs and their strategies

Preventive services

The State Department of Health, Division of Personal and Family Health, Maternal and Child Health Section supervises and plans for programs which effect the outcomes of pregnancy. These programs include:

Obstetric Clinics - Des Moines, Broadlawns: 720 pregnant women served in 1978

Prenatal Clinics - Cedar Rapids, St. Luke's Methodist: 550 women served in FY 1978

Well Child Clinics - public health nurses screening and follow-up take place at four sites Hardin, Polk, Johnson and Linn Counties; over 3,000 children seen in FY 1978

Child Health Centers - 14 Centers served 9,508 or 6.2% of the 153,000 children of low income in FY 1978 these children received physical assessments, immunizations and anticipatory guidance in nutrition, dental care, physical and mental development

Children and Youth Project of Iowa, A Program of Projects - at Scott County comprehensive, continuous health services to children 6-18 years of age; focuses on health promotion in low income families

Child Health Screening Centers - 34 center sites in conjunction with the Department of Social Services provide Early Periodic Screening, Diagnosis and Treatment (EPSDT) examination for medicaid eligibile persons under 21 years of age. EPSDT clinics screened 21,009 (33%) of the 62,000 eligible youth in 1978. Private physicains screened another 16,567 (27%) of the 62,000 eligible youth. 4,440 (7%) of the 21,000 EPSDT eligible youth were screened by public health nurses or at child health centers

The Department of Health, under proposed State Legislation Child Health Assurance Program (C.H.A.P.) is seeking increased funding so that each child health screening center could become child health centers, which offer treatment and consultation as well as screening.

Maternal Health Centers - Five centers serve 14 counties, and seek to provide, through good preventive prenatal care, beginning early in pregnancy, the birthing

of healthy babies. Of the 73,714 low income women in Iowa, only 2,465 received care in FY 1979 at Maternal Health Centers.

Iowa Maternity and Infant Care Project, A Program of Projects - a demonstration program for all pregnant women and infants up to 12 months of age who reside in the 14 counties of the Governor's planning region XV - based in Ottumwa are eligible for services offered. The project assures appropriate hospitalization, dental care, nutrition counseling, social counseling and follow-up.

Statewide Family Planning Program - through the state offers cancer screening infommation, counseling and supplies for birth control, pregnancy testing, sterilization and educational programs.

Suddent Infant Death Program - through the state provides information and counseling for persons involving with the loss of an infant due to SIDS.

Special Supplemental Food Program for Women, Infants, Children (WIC) - of the 41,025 low income women and young (0-5 years of age) children eligible only 15,790 or 38% received services in FY 1979. Foods to be received are determined through consultation with a nutritionist; education and small group counseling is provided. (WIC is discussed in greater detail on page 86).

Most of the above programs are funded through Title V, Social Security Act. However, the Statewide Family Planning Program is funded largely through Title X of the Public Health Service Act, and the WIC Program is funded through the Child Nutrition Act of 1966, as amended in 1978.

The WIC program sprang from the recognition that good nutrition begins at conception. The State Health Plan for Women and Children gives special emphasis to adequate nutrition for the low income. While those in poverty may be able to counter their hunger with food, it is established that unless they have sufficient health education to make the proper selections, their final outcome is malnutrition. Those programs listed above, the WIC Program, Maternal Health Center, Child Health Centers and Children and Youth Project which offer nutrition counseling and health education need to be continued and, in some cases, expanded so that more of the persons eligible receive the prevention services which will improve the health of the present and succeeding generations.

In FY 1979, Iowas WIC Program returned___% of its monies to the federal government because of a state staff shortage, which did not allow the state to administer the monies. Monies were returned despite the fact that only 38% of the 41,000 eligible pregnant women and children were served. The Health Department needs several more administrative staff (it now has____) to handle the $ million WIC Program.

State Services for Crippled Children (SSCC) - are funded through Title V of the Social Security Act, special clinics are held periodically throughout the state. No income level is set by the SSCC. Over 6,340 children were screened in FY 1978.

Iowa Council on Adolescent Health - funded through a national initiative to prevent unwanted teenage pregnancy, the council has sponsored several conferences and workshops for teens and adults; advocates for education for the causes of unwanted pregnancies; and serves as a resource to the Iowa State Department of Health's Maternal and Child Health Section.

The States Regional Genetic Consultation Service, created through Chapter 136A,

Code of Iowa, 1979, helped over 700 families and 1,703 individuals during 1977. This service is now available throughout the state.

Genetic counseling services appraise and inform couples (prior to conception) of the risk of a genetic disorder occuring in their children. This appraising involves the development of a family pedigree (what types of disorders have occurred in family members in the past) and a chromosomal analysis (done on a blood sample from the potential mother and father to determine any possible chromosomal abnormalities).

The State Maternal and Child Health section plan to reach an additional 300 persons a year by 1984 through the Regional Genetic Consultation Service RGCS). In FY 1980, RGCS reveived $150,000 in federal grants and _____ in state appropriations.

Unlike the Genetic Consultation Service, which is funded in part through state appropriations, non of the maternal and child health programs listed on page receive state appropriations. With only 33 counties and only 6.2% of the 153,000 eligible low income children receiving the Early Periodic Screening Diagnosis Treatment of Child Health Screening Centers, state appropriations are needed to serve more of these at risk children. State appropriations and changes to allow medicaid coverage from the first trimester of pregnancy are also needed to serve the estimated 6,500-9,000 Iowa women of low income (150% of poverty level/who become pregnant each year) through Maternal Health Centers. Only 2,465 women were served by Maternal Health Centers in FY 1979.

One state policy on health care for low income women changed in 1979. A woman may now be eligible for the Aid to Families with Dependent Children (AFDC) during her third trimester of pregnancy, and hence eligible for medicaid benefits. However, medicaid eligibility should begin the first trimester of pregnancy. The earlier care begins, the less is the risk to the mother and and child, hence the fewer costs to society over the childs life.

Hill Burton hospitals are required to provide some free care to persons whose income is not more than the current poverty income guideline each year.

Another problem for the low income is that many pregnancy and infant care program guidelines preclude the near poor (income of 150% of poverty level) from participation. For many "medically indigent" families paying for services is often just as difficult as for those persons with incomes below the poverty level.

STATUS GOAL 15: A DECREASE IN THE NUMBER OF RISK FACTORS WHICH RESULT IN MORBIDITY AND MORTALITY IN PREGNANT WOMEN AND INFANTS.

SERVICE GOAL 15: THROUGH EDUCATIONAL, LEGISLATIVE, ECONOMIC AND SERVICE STRATEGIES INCREASE AVAILABILITY AND UTILIZATION OF STATEWIDE COMPREHENSIVE HEALTH SERVICES FOR WOMEN AND CHILDREN.

Objective 1: By 1985, antepartum and postpartum health care given to women in maternal health centers will be increased from 2% (2,465) to 10% (7,371) of the low income women in the State.

SRRA 1: State Department of Health will identify and seek funding sources needed to expand maternal health center services.

Objective 2: By 1985, supplemental foods and nutrition education will be increased from 30% to 65% of the low income children 0-5, pregnant women, and postpartum women who are nutritionally at-risk.

SRRA 1: State Department of Health will gain legislative approval for additional administrative staff.

Objective 3: By 1985, indepth counseling and follow-up will be provided to an additional 300 Iowa families involved with a birth defect or genetic disease by 1984.

SRRA 1: Regional Genetic Consultation service will continue to operate at current levels.

LRRA 1: Registry of epidemiology program added for genetic/birth defects to current program.

Objective 4: By 1985, dental health education and dental health services will be increased by 25% to children and low income, pregnant women in the State by 1984.

See Fluoridation for actions

Objective 5: By 1985, Medicaid program expanded to cover women from the first trimester of pregnancy, so that no more than 3000 women enter care later than first trimester.

LRRA 1: State agencies concerned with maternal and child health will seek support of State legislative changes in Medicaid program.

SRRA 1: ISDOH will develop public information campaign to be jointly sponsored with other statewide agencies.

Objective 6: By 1985, at least 25% or 110 of the 447 local school districts offering comprehensive school health education as defined in the 1979 Comprehensive School Health Education Final Report.

See page 69 for actions.

Objective 7: Yet to be added on services for teens.

Objective 8: By 1985, 25% of EDSDT eligible children screened annually (6% are now screened) by public health nurses or at child health screening centers.

LRRA 1: State Department of Health and Department of Social Services will expand center sites from 34 to _____.

Objective 9: By 1985, expansion of child health centers from 33 counties to Statewide.

LRRA 1: State Department of Health will contact with local public officials to identify resources available and need to expand.

Objective 10: By 1985, preventive education for parents on accident prevention, nutrition, health care services available at hospitals for all new parents, with public health nursing home follow-up for at-risk mothers and infants.

LRRA 1: State Department of Health will contact the Iowa Hospital Association, and at least five hospitals in the State to provide information on and encourage accident prevention education.

References for Pregnancy and Infant Care

1. Iowa State Department of Health, Division of Records and Statistics, Detailed Report of Vital Statistics, 1976.

2. The President's Committee on Mental Retardation, Mental Retardation: Century Decision, 1975.

3. Iowa State Department of Health, Division of Records and Statistics, Detailed Report of Vital Statistics, 1976.

4. L. Jean Bogert, George M. Briggs, and Doris Howes Calloway, Nutrition and Physical Fitness, W.B. Saunders, 1973.

5. K. Benirschke, et. al., Genetic Diseases, DHEW Publication No. (NIH) 76-853.

6. Freeman Quimby, and Cynthia Chapman, "National Nutrition Policy: Nutrition and Health", a working paper prepared for the Secect Committee on Nutrition and Human Needs, U.S. Senate, May, 1974.

7. Compiled from Iowa Hospital Association, Average Length of Stay by Diagnosis and Procedure in Iowa Hospitals, 1975, 1976.

8. Disease Prevention and Health Promotion: Federal Programs and Prospects, PHS, DHEW, 1978, pp. 123-125.

Other References

A Study of the Health of Iowas Infants and Youth, American Academy of Pediatrics, Iowa Chapter, 1979.

Iowa Health Plan for Women and Children 1979-80, J. Borgmeyer and V. Babcock, Maternal and Child Health Section, ISDH.

Family Planning

STATUS

Indicators

- pregnancies as a % of wanted pregnancies by mother's marital/socio-economic characteristics
- contraceptive use/nonuse by man's/woman's socioeconomic characteristics

Many pregnancies unwanted

In Healthy People, the Surgeon General makes the following comment, "Any child whose birth is planned,is far more likely to get off to a healthy start in life and to receive the continuing parental love and support needed for health development.

"Yet of the more than four million pregnancies a year in this country, over one million are terminated legal abortion. And, of the slightly more than 3 million births, an estimated 1.3 million are unplanned. It appears then that half of all pregnancies are mistimed, and many are unwanted." (1)

Iowa data on the proportion of pregnancies that are wanted and unwanted and the proportion of women using contraceptives has not been collected. Here estimates of Iowans for these indicators are based on national studies.

In Iowa, in 1978 about 91% (40,443) of the 44,559 births were to married women. Based on national data of these 40,443 babies:

- 10% (4,000) were born to married women who had not wanted to conceive
- 25% (10,000) were born to married women who had wanted to conceive, but not at soon as they had

In 1978 in Iowa, the 9% (4,116) of the 44,559 births were to single women. Of these 4,116 births:

- % ( ) were born to women who had not wanted to conceive at that time

While one in in 10 births were unintended for married women, one in four were unintended for blackwomen, and one in five were unintended for women with incomes below the poverty level. Users of contraceptives include 80% of married couples, and 75% of the sexually active single women. However, 45% of single women use contraceptives only occassionally. (2) Nationally, only about 50% of sexually active teenagers use contraception.

Teenage Parents

In Iowa of the women giving birth in 1978, 5,919 (15%) were teenagers. Of the single women giving birth that year about 50% (3,822) were teens. While nationally teens represent only 17% of women giving birth and 21% of all women of child bearing age, teens account for about one-third of all abortions. One in ten teenage women in the United States become pregnant each year. One in twenty teenage women is a mother before her eighteenth birthday.

In a study cited in Healthy People, sexually active teenage women gave the following reasons for not using contraceptives:

- ability to predict the time of month when they are fertile
- belief that chances of pregnancy are low, and
- services were unavailable (3)

For teenage mothers, the consequences of choosing to raise their children are likely to be severe and long lasting. Teenage mothers are likely to interrupt or terminate their formal education, to give up or curtail social interaction with peers, and to have low incomes for the rest of their lives.

Data in the Iowa Health Plan for Women and Children, 1979-80 sites Iowa vital statistics for 1977 in which 2,201 infants were born to women 17 years of age and younger. (49 of every 1,000 live births and 5% of all births that year)

In the United States between 1971 and 1976, the percentage of single 15-17 year old women who have had sexual intercourse at least once increased from 20.5% to 28%. (4)

If the same percentage of Iowa teenage women 15-17 years of age have also had sexual intercourse, then potentially 23,670 (28%) women in this age group need family planning or counseling services.

SUMMARY OF MAJOR FACTORS APPARENTLY ASSOCIATED WITH PREMARITAL INTERCOURSE AMONG ADOLESCENTS

Factors	Males	Females
Social Situation		
Father having less than a college education	unknown	yes, for blacks
Low level of religiousness	yes	yes
Norms favoring equality between the sexes	probably	yes
Permissive sexual norms of the larger society	yes	yes
Racism and poverty	yes	yes
Migration from rural to urban area	unknown	yes
Peer-group pressure	yes	not clear
Lower social class	yes (probably)	yes (probably)
Sexually permissive friends	unknown	yes
Single-parent (proably low-income) family	unknown	yes
Pschyological		
Use of drugs and alcohol	yes	yes
Low self-esteem	no	yes
Desire for affection	no	yes
Low educational goals and poor educational achievement	yes	yes
Alienation	no	yes
Deviant attitudes	yes	yes
High social criticism	no	yes
Permissive attitudes of parents	yes	yes
Strained parent-child relationships and little parent-child communication	yes	yes
Risk-taking attitudes	yes	yes
Passivity and dependence	no	yes
Aggression; high levels of activity	yes	no

High degree of interpersonal skills		
Lack of self-assessment of psychological residents	yes	no
Biological		
Older than 16	yes	yes
Early puberty	yes	yes (probably for blacks)

Variables supported by only one or two small studies. Other variables are supported by a number of investigations.

From: Social Work, "Teenage Pregnancy: A Research Review", p. 193, November 1979.

Family Planning Services: Focus for State Initiative Iowa published by Alan Guttmacher Institute in 1975 identified 73,740 women of child bearing age (15-44 year of age) who had incomes below 150% of the poverty level, and would therefore be in need of family planning services. The Guttmacher Study also estimated that about 16% of these women of low income receive services from their private physicians. In 1979, 26,700 women at low income were served by the family planning programs funded through the Iowa Statewide Family Planning Program. This would leave about 48% or 34,242 of the women-in-need identified in the Guttmacher Study without family planning services.

The grant application of the Iowa Statewide Family Planning Program, however, disputes the number of 20,500 or 16% of low income women who are estimated to be served by private physicians now served by private physician, stating that it is impossible to identify the percent of women of low income being served by private physicians.

Besides the "quality of life" issue of people being able to choose from when and of what size to make their families, family planning is vital in order to limit world population growth. World population now grows exponentially, at a rate of 1.64% a year (only 5 years ago this rate was 1.98%), doubling every 41-48 years. At this current annual growth rate of 1.64% in 48 years, excluding Anartica, there will be one human for every square meter of dry land on the earth (one square meter equals about 39 square inches).

SYSTEM

Indicators

- federal policies by enabling legislation by barriers addressed
- state policies by enabling legislation by barriers addressed

Federal Policies

Social Security Act, Title IV-A, Family Planning Provisions - requires state to offer to serve current and potential AFDC recipients with family planning, and encourage services for sexually active minors. Federal matching monies are provided on a basis of nine federal dollars for every one state dollar.

Social Security Act, Title XIX - requires state to reimburse family planning as part of medicaid program, encourages contractual provision of services, provides nine federal dollars for every one state dollar.

Social Security Act, Title XX - gives to states monies for community base social services based on population, income and staff matching monie: $150,000 in Title XX monies were contracted to the Statewide Family Planning Programs in FY 1980.

Public Health Services Act, Title X - requires states to develop family planning programs and allocates monies to states for such.

Nationally, barriers to preventing unwanted pregnancies center around the availability and quality of family planning, and include the lack of:

- the lack of information dissemination of family planning, human sexuality and family education life at early ages by parents and teachers rather than peers, especially for low income men and women, and outside
- more wide distribution of non-prescription contraceptives
- skills of social workers and other individuals in health care who serve adolescents
- client time required for social educational and medical as assessments in family planning clinics (3)

Goals contained in Objectives for the Nation are the:

- reduced unintended pregnancies among teenagers and other medically and socially at risk populations
- increased availability of infertility diagnosis and treatment
- increased safety of surgical sterilization and temporary contraceptives (reduced percentage of sale of oral contraceptive high in estrogen)

Current federal expenditures in family planning are about $294,000,000 a year for contraceptive research, public information and genetic counseling. Most federal family planning monies are allocated through Title X of the Public Health Service Act. However, the Health Care Financing Administration encourages family planning in state medicaid programs by paying for services at a 90% federal - 10% state rather than the usually 50-78% federal.

In FY 1979, the federal government began a preventive teenage pregnancy initiative. For this initiative in FY 1979 $60,000,000 was budgeted.

State Policies and Programs

Legislation

Chapter 234.21 - 234.28 (Code of Iowa, (1979), set Iowa's policies for family planning services. These policies direct that:

- services may be offered for any department of social services eligible client and include interviews, literature distribution, physician referral, examination, tests
- all clients have the right to refuse services for religious or other convictions and to receive services in a language which they can understand

Programs

Family planning services

The Iowa State Department of Health administers the Iowa Statewide Family

Planning Program. The Family Planning Program encompasses 17 private agencies that provide services to all of Iowa's 99 counties.

In 1979, 47,069 received services through these agencies 7,896 of those persons were less than 18 years of age. (An estimated 23,000 women of this age have had intercourse at least once). Pregnancy testing, patient education, sterilization, and infertility counseling are services available upon request. In some of the local Family Planning agencies, through physician referral network, individual physicians are reimbursed for providing examinations, while agency staff provide onsite education and counseling. In other agencies, independent clinics provide all services inhouse.

In 1975, while 65% of the women of child bearing age with income 150% of poverty level or less were in non-metropolitan counties, only 35% of those persons served were in non-metropolitan areas. (5)

The availability of family planning through subsidized clinic has grown steadily since 1968 when only 5,600 Iowans were served. However, it appears that large percentage of women of child bearing age particularly teens are non-metropolitan residents who remain in need of some family planning services - medical services, contraception, education, counseling, etc.

Education and information strategies

Considering the rising percentage of teens who are sexually experimenting or active, the need for information about and geographic accessibility to contraception becomes important. Also, family life education in the communities and schools is vital for teens. Deciding whether or not to use drugs, deciding whether or not to have sex requires decision making skills, such as those learned in values clarification classes. Information dissimination alone will probably do little to change the incidence of teenage pregnancy. All 17 family planning agencies offer community and patient education along with clinical services. But the number of persons reached through outreach and in-house education is unknown. Limited access to classrooms, particularly in the lower grades, impacts the effectiveness of these services.

The accessibility of these services to teenagers in non-metropolitan rural areas has been identified also by the Maternal and Child Health Section of the State Department of Health as a problem. In a recent special school survey conducted by the Maternal and Child Health Section, 50% of individuals who responded to the survey in non-metropolitan schools were unaware that family planning services are available statewide, and 39% were unaware of the availability of mental health services.

Consumers interested in the issues of geographic accessibility to, information dissemination, and community education about family planning have several channels through which to act. Mandated health planning agencies and reviews of family planning grants which the Department of Health gives to local agencies are to begin in 1980. The Health Systems Agencies and the State's Office for Health Planning and Development will conduct these reviews. As a result of the initiation of these reviews, the State Family Planning Consumer and Provider Advisory Council was discontinued in 1979. At the community level, state funded family planning agencies rely on advisory Boards composed of consumers and providers in the agencies service aeas.

A Preventive Service task force of the Office for Health Planning and Development

preventive services identified the following areas of needed change in Iowa's family planning service system.

- integration of family planning clinics with other maternal, infant, and child health
- heightened family planning counseling skills for providers of other preventive social and health services
- wider availability of education on family planning and service availability for teenagers
- family life/sex education for kids in primary and secondary schools
- inclusion of menopause education as part of family planning/sex education and counseling, especially for teens
- in rural areas of Iowa, greater access to available family planning and counseling, especially for teens
- services to minorities in urban areas
- more commitment of state funds to supplement dwendling Title XX monies for family planning
- more consumer advocacy and education and outreach at the local and state levels for services which prevent unwanted pregnancy

STATUS GOAL 16: ALL CHILDREN BORN WANTED.

SERVICE GOAL 16: FAMILY PLANNING SERVICE SHALL BE AVAILABLE TO ALL IOWA RESIDENTS IN NEED OF THESE NECESSARY HEALTH CARE SERVICES REGARDLESS OF AGE, SEX, RELIGION, RACE, MARITAL OR SOCIAL STATUS, WITH SPECIAL EMPHASIS DIRECT TOWARD LOW INCOME POPULATIONS.

Objective 1: By 1985, family planning services to low income women including teenagers, at risk of having unwanted pregnancies increase by 25% from 47,000 to 58,000

LRRA 1: SDOH will identify additional resources need to reach Iowans in need.

Objective 2: By 1985, increased school community education on ways to prevent, and to choose not to have unwanted pregnancies.

LRRA 1: Inventory current community and school family planning education efforts.

Objective 3: Referral services linkages stronger between State Department of Health Maternal and Child Health projects and Family Planning services.

LRRA 1: State Department of Health staff establish procedures which define how and when cross referrals are appropriate.

Objective 4: All local family planning agency's assume greater outreach into rural areas.

LRRA 1:

References

1. Promoting Health and Preventing Disease: Objectives for the Nation, DHEW, 1979, pp. 8-9.

2. Healthy People, PHS, DHEW, 1979, p. 85.

3. Promoting Health and Preventing Disease: Objectives for the Nation, DHEW, 1979, pp. 10-11.

4. Healthy People The Surgeon Generals Report on Health Promotion and Disease Prevention Background Papers, PHS, DHEW, p. 356.

5. Family Planning Services: Focus For State Initiative: Iowa, Alan Guttmaecher Institute, NY,NY, 1975, p. iii.

Sexually Transmitted Disease

STATUS

Indicators

- incidence by age groups
- disease by complications by rate per 100,000 persons

Incidence rates

In 1977, 86% of the 10 million cases of sexually transmitted diseases in the United States occurred in 15 to 29-year-olds.

Common sexually transmitted diseases include: (1)

Trichomoniasis - 3 million cases or 1360 cases/100,000 U.S. population
Gonorrhea - 2.5 million cases or 1130 cases/100,000 U.S. population
Non-gonococcal urethritis (NGU) - 2.5 million cases
Genital herpes - 500,000-1,000,000 cases
Syphilis - 80,000 new cases

In addition, at least two forms of hepatitis are sexually transmissable. While trichomonoiasis occurs frequently, its consequences are not known to be severe.

Syphillis and gonorrhea

Federal education and treatment efforts in the early 1960's to control sexually transmissable diseases, particularly gonorrhea and syphilis, resulted in gonorrhea incidence, which had quadrupled between 1960 and 1975, plateauing in 1975. In the United States in 1976, hospitalizations for pelvic inflammatory disease were down 50% from 1971. (2)

In 1978, there were 193 reported gonorrhea cases/100,000 population, and 1.2 reported syphilis cases per 100,000 persons. Though these conditions are treatable with antibiotics, they are not currently prevented by immunization. Over one-third of the cases of gonorrhea in Iowa each year occur among teenagers. Almost nine of ten gonorrhea cases occur in persons less than thirty.

If an individual with gonorrhea is not diagnosed and treated, complications may begin. Sterility may result in both men and women. The most common complication in the female is pelvic inflammatory disease (P.I.D.). P.I.D. is an inflammation of the tissues of the reproductive organs such as the fallopian tubes or the uterus.

Because gonorrhea first attacks the urinary tract in the male, the first complications are usually associated with the urethra and the blander. The scarring that results from the gonorrhea germs attacking the urethra may leave this tube partially or completely closd by scar tissue. Such a stricture may make it difficult or impossible for the male to urinate.

There are other possible complications. Occasionally, the organism of gonorrhea is carried by the blood stream from the reproductive parts and organs to other areas of the body. One common place for the organism to settle is in the

joints, causing a very painful form of arthritis or heart disease. None of the complications of gonorrhea need occur if the infected individual consults a doctor for diagnosis and treatment.

One other complication of gonorrhea which should be mentioned is eye infection. If a pregnant woman has gonorrhea at the time she delivers her child, the disease organisms may infect the child's eyes as it passes through the mother's birth canal. Blindness could result. Because of this danger, most states, including Iowa. require that preventive drops of silver nitrate medication or an antibiotic be placed in the eyes of every newborn child. Also, an adult could infect his or her own eyes by hand-to-eye transmissions of gonorrhea germs.

Syphilis is a systemic disease, which means that the causative organism gets in the circulator system--both the blood stream and the lymphatic (disease defense) system. Compared with gonorrhea, syphilis occurs infrequently in Iowa. Groups with higher rates than the national average include homosexuals, migrant workers, and the poor.

Genital herpes

"Genital herpes--which is manifested by very painful lesions similar to cold sores or fever blisters can cause severe neurological damage in an infant infected while passing through the birth canal. Such infection occurs in 50% of infants delivered vaginally by infected mothers. Active lesions in a pregnant woman are an indication for a Caesarean section." (3) The annual incidence rate of herpes simplex based on national rates is probably around 350 cases per 100,000 population.

SYSTEMS

Indicators

- Federal Policies by programs by strategies
- State Policies by programs by strategies

Federal Policies

"The main thrust of the HEW effort is...CDC's VD control program through which CDC provides funds and manpower to states for casefinding, screening and diagnostic services for syphilis and gonorrhea. The Bureau of Community Health Services... provide(s) for sexually transmitted disease prevention in their constituencies. A relatively small emphasis is placed on other diseases that can be sexually transmitted, (25 million cases annually), and genital herpes, for which there is no effective treatment and which may be a precursor to cervical cancer." (4)

Priority methods to reduce the incidence of sexually transmitted disease included Objectives for the Nation are:

- Education and information dissemination to encourage at risk groups to take precautions
- Increased use of condoms
- Introduction of vaccines as soon as are developed
- Ready access to early diagnosis and treatment which do not stigmatize persons receiving services
- Education and health professional education

Specific objectives identified in that same publication include; by 1990:

- all providers capable of diagnosing genital herpes
- all providers capable of diagnosing of hepatitis B
- data collected to determine herpes simplex, NGU, and other STD incidence rates in each state
- all HSAs prioritizing STD services for their service areas
- medical students receiving at least 20 hours of clinical experience in an STD facility
- one-half of all industries and businesses including STD education and tests within health and wellness programs.

State Policies Programs

Legislation

Iowa's State Department of Health administers and enforces the provisions of Chapter 140, Venereal Disease Control, Code of Iowa, 1979. Chapter 140 mandate the:

- confidentiality of all names, which are never accessible to the public, of persons reported to have VD
- sanctions for physicians who fail to report cases
- diagnosis and treatment of all persons reasonably expected to have venereal disease (syphilis, gonorrhea, granuloma, inguinale, and lymphogranuloma venereum)
- blood test of pregnant women
- eye treatment of newborns

Programs and their strategies

Preventive services

The Iowa State Department of Health - Venereal Disease Control Section is the control and coordination agency in the state for all venereal disease programs.

The Venereal Disease Control Section fulfills requests for venereal disease information received from schools. Local volunteers including civic groups, physicians, local public health nurses and other organizations give presentations when schools request. Staff from the Venereal Disease Section visit physicians and laboratories to encourage their prompt and complete reporting of cases and positive test results, respectively, and to provide literature and information to them. If funds permit, drugs used by physicians for the treatment of gonorrhea and syphilis are replaced to the physician, upon his request when reporting the case.

To identify persons infected with gonorrhea it is necessary that the Venereal Disease Control Section help supervise 13 public health representatives. This staff of public health representatives engage in a wide variety of activities that help to identify areas other than venereal disease, including zoonotic, nosocomial, and immunizable disease morbidity.

The public health representatives are assigned to specific geographical locations. The primary responsibilities of the epidemiologic staff are as follows:

1. To interview all reported cases of gonorrhea in males and females for their sexual contacts that had occurred during a 30 day period prior to the onset of their disease.

2. To refer these contacts for medical evaluation.
3. To arrange for preventive treatment when indicated.
4. To visit all private physicians in priority specialties.
5. To visit all laboratories that do testing for venereal disease.

The Iowa State Department of Health Venereal Disease Control Section spends each year about $182,000 in federal, and $144,000 in state monies on venereal disease control. But these monies allow for little more than keeping the number of cases from expanding.

STATUS GOAL 17: THE PRESENT RATES OF SEXUALLY TRANSMISSABLE DISEASES LESSENED IN ORDER TO KEEP DAMAGE TO HEALTH, INCLUDING BLINDNESS, STERILITY, SYSTEMIC AND LOCAL INFECTIONS AT A MINIMUM.

Objective 1: By 1982, no more than 6,000 cases of gonorrhea per year (1978 = 7,260 cases; 1976 = 6,500 cases)

SERVICE GOAL 17: EDUCATION ON AND PREVENTIVE HEALTH SERVICES FOR SEXUALLY TRANSMISSIBLE DISEASES IN ORDER TO MAINTAIN OR LESSEN THE PRESENT RATES OF SEXUALLY TRANSMISSIBLE DISEASES.

Objective 1: By 1988, 95% of exposed gonorrhea cases given preventive treatment each year.

SRRA 1: State Department of Health will continue surveillance activities of contacts.

Objective 2: By 1985, update Iowa Code to reflect recent changes in use of term "sexually transmissible disease" instead of venereal disease.

LRRA 1: State Department of Health will draft need changes in Chapter 139 and submit to the Board of Health.

Objective 3: By 1985, stronger referral links and follow-up between family planning clinics doing STD screening and STD clinics.

LRRA 1: State Department of Health will develop standards for family planning agencies regarding follow-up on positive cases.

Objective 4: By 1985, STD information and education as part of comprehensive school health education in at least 25% of local school districts.

(See action steps on page 69).

Objective 5: By 1985, all medical students going into primary care specialties having at least 20 hours of diagnosis and treatment experience in sexually transmissable diseases.

SRRA 1: State Department of Health will inventory U of I and COMS to determine STD clinical experience primary care primary care specialties.

Objective 6: By 1985, adult education classes for parents on family life, sex education and sexually transmissible disease prevention

within the boundaries of each area education agency and family planning service area.

LRRA 1: State Department of Health will inventory AEAs and family planning agencies to determine number of persons served classes available in family life adult education classes.

References

Sexually Transmitted Diseases

1. Healthy People, The Surgeon General's Report on Health Promotion and Disease Prevention, PHS, DHEW, 199, p. 96.

2. Ibid., p. 97.

3. Ibid, p. 96.

4. Disease Prevention and Health Promotion: Federal Programs and Prospects, PHS, DHEW, 1978, p. 127.

Immunization

STATUS

Indicators

- childhood immunizable diseases by incidence rates
- other immunizable diseases by incidence by related mortality

A communicable disease is a disease which can be transmitted from one person to another or from another animal to a person. An immunizable communicable disease is one for which vaccines can be adminstered to produce immunity. At one time, immunizable communicable diseases were a major cause of death in the United States. Today, thanks to public health and immunization efforts, this threat has been greatly decreased. The 11 immunizable communicable diseases are:

Diseases for which effective immunization exists:	Diphtheria Hepatitis Influenza Measles Mumps Pneumonia Polio Rabies (see infectious agent section) Rubella Tetanus Whooping Cough

Seven childhood immunizable disease

These immunizable diseases, diphtheria, measles, mumps, polio, rubella, tetanus and whooping cough still pose a potential problem within the state. But since the enactment the child care and school entrance immunization law in 1978, the incidence of the seven childhood immunizable diseases has declined dramatically. In 1979, there were only 16 cases of measles, 53 cases of rubella, one case of pertussis, 246 cases of mumps (not required by the law but rates are declining as most physicians use a measles-mumps-rubella combination vaccine), and no cases of tetanus or diphtheria. There were three cases identified as poliomyelitis but these occurred only within a group opposed to immunizations. The figures are among the lowest in the state's history. This decline is contingent upon the continued high percentage of vaccinated individuals and the continued vigorous enforcement of the states school and child care center immunization law.

Other immunizable diseases

Influenza occurred in 1977 at a much higher incidence rate than any other reported communicable disease, (1,870 cases/ 100,000 persons). It was followed by reported cases of gastro intestinal viral infections with a rate of 860 cases/ 100,000 persons and the incidence rate of hepatitis, 81/100,000 persons. Since 1970, pneumonia and influenza combined have been the fifth leading cause of death in Iowa, accounting for about four percent of all deaths each year. Infants and that group of persons over 65 years of age are at risk of dying from pneumonia and influenza. These age groups have death rates from these diseases higher than the rest of the population of Iowa. In general, infants, persons over 65 years of age and any one which has a chronic diseasee such as diabetes, heart disease, bronchitis, empheysema, or end stage renal disease are more likely to die or develop pneumonia as a result of contacting influenza.

Within the past year or two, for certain strains of pneumonia, an effective immunization has been made available. The Center for Disease Control of DHEW recommends that states consider the distribution of this vaccine to high risk individuals. If a choice were to be made between immunizing at-risk individuals for pneumonia or influenza, State Department Of Health officials recommend that the pneumonia vaccine be administered first. Most persons who die from influenza, die not from the viral infection, but from pneumonia which they develop as a result of their weakened resistance.

SYSTEMS

Indicators

- federal policies by strategies
- state policies by enabling legislation by strategies

Federal policies by barriers addressed state policies by enabling legislation by barriers addressed.

Federal Policies

"Immunization ($91 million) represents the major thrust of HEW's prevention efforts in the area of communicable disease. In addition to epidemiological studies, research into the pathogenesis (bacterial and viral), and the development and testing of vaccines, the National Institute of Health and the Center for Disease Control disseminate information of the results of their investigations. The Center for Disease Control also pays for and distributes vaccines and provides grants to states for immunization programs...Maternal and Child Health, Children and Youth and Family Planning (of the Health Services Administration) also provide immunizations."

"In 1977, HEW launched the Childhood Immunization Initiative to correct a situation in which (about 40%) of children under 15 years of age were not adequately immunized". (1)

HEW initiated in 1978 a grant program to increase influenza vaccines among high-risk groups. However, federal committment to continue this program is not assured.

Objectives for the Nation (DHEW, 1979) suggests tha following be accomplished by 1990:

- Influenza vaccine immunization exist in at least 60% of high risk populations
- Pneumococcal vaccine immunization levels at least 60% in designated high-risk populations
- Surveillance system such that 90% of those hospitalized, and 50% of those not hospitalized with vaccine preventable disease of childhood are reported, and that uniform case definitions are used nationwide
- Within 5 years of licensure of new vaccines, attain immunization levels of at least 50% in defined target population (by 1985)
- Capacity to mount mass immunization programs in the face of possible epidemics of influenza or other epidemic diseases for which vaccines may exist
- Ensure that all health insurance carriers cover routine immunization

State Policies and Programs

Legislation

Chapter 139, Contagious and Infectious Disease, Code of Iowa, (1979) - requires the State Department of Health to:

- investigate and survey the causes of diseases and epidemics
- establish stations throughout the state for the distribution of anti-toxins and vaccines to physicians, and
- enforce Chapter 139.9 (Code of Iowa, (1979), which prohibits enrollment in licensed child care centers, elementary or secondary schools unless the child is adequately immunized.

(For more on state policies iterated in the Code of Iowa on communicable disease, reference Infectious Agent Section, page 134.)

Programs and their strategies

School Immunizations

The compulsory day-care and school immunization law, which became effective January 1, 1978, covers all children enrolled in an elementary or secondary school or licensed child-care center. (approximately 685,000)

Because of the immunization law, close to 97 percent of all school-age and day care center-enrolled children are up-to-date in their immunization schedules against rubella, rubeola, polio, diptheria, tetanus and pertussis. Children are not required by the legislation to be immunized for mumps. However, 85 percent of these children are immunized. Also important, in order to prevent birth defects, including mental retardation, is to have all women of childbearing age immune to rubella. Screening of teenage women and the provision of rubella vaccination to those who are not immune, and who are not pregnant or who do not plan to be pregnant within three months of the time of the vaccination is desirable if rubella related birth defects are to be eliminated.

Children less than school and day care age in Iowa have not reached the desired herd immunity 90 percent immunization level. However, the level of immunizations found in this group is high. In a survey conducted by the State Health Department in 1977, 78.1 percent of all tow year old, 92% of all kindergartners, 91.4% of all day care and 90.2% of all children in Head Start were fully immunized at levels recommended for their age groups.

Currently, 59 counties provide regular free immunization services to their residents. Twenty-two counties provide free immunizations when the patients are referred to a public health nurse by physician. Most of the larger communities are providing immunization service. The Iowa State Department of Health routinely conducts free school based immunization programs where needed.

The Immunization Program of the Iowa State Department of Health conducts a yearly 2-year old survey and a K-12 audit. The 2 year-old survey is a random sample done primarily by mail with telephone follow-up on non-responders. The K-12 audit is conducted by local boards of health. The program conducts outbreak control programs whenever the need arises. Cases of measles are investigated. Susceptibles are determined and an appropriate course of action such as free clinics are initiated immediately.

The Iowa State Department of Health Immunization Program provides vaccines free to Iowa Physicians on request. The Iowa Medical Society conducts training sessions on immunization matters in conjuntion with the Iowa State Department of Health. Immunization program personnel regularly attend Iowa Medical Society meetings whenever immunizations are to be discussed.

An Iowa Immunization Action Advisory Committee provides outside expertise and guidance to the Immunization Program. The Committee has representatives from volunteer organizations such as the PTA and the Women's Auxiliary of the Iowa Medical Society who assist in the coordination of volunteers during Immunization Action Month. Volunteers also frequently participate in clinic activities as clerical and medical support personnel.

Iowa hospitals have on occasion assisted the efforts of the Immunization Program by distributing supplies and vaccine through their pharmacies. Personnel from the Iowa Medical School Hospital often lend their expertise and influence toward the efforts of the program. The program provides vaccine to Maternal and Child Health clinics, to Early Periodic Screening, Diagnosis and Treatment Program clinics and to neighborhood health centers.

The schools of Iowa remain as valuable resources to the Immunization Program. Much of the work of the program centers around the schools. The schools are active in their support of the program.

For individuals who can afford to pay, and for individuals covered by Medicaid, immunizations and veneral disease treatment at a private physician's office present no financial problems. But for individuals who fall into the "near poor" category, (100 to 125 percent of poverty level) about 5.0 percent of all residents in Iowa, the cost of vaccinations in private physicians' offices may be prohibitive. Throughout the state, children in low income families tend not to receive the recommended immunizations before school age. Thus, financial accessibility may possibly become a barrier to service unless public clinics or school imunization services and reimbursement for veneral disease treatment and screening are available and accessible.

The cost of a complete regimen of vaccinations against the seven immunizable communicable diseases (diptheria, measles, mumps, polio, rubella, tetanus and whooping cough) for one individual is $7.54. Although charges in physicians offices will be greater than costs, while in many public clinics vaccines are free.

Influenza vaccine initiative

Influenza vaccine is available at a cost of approximately one dollar per injection at many mass clinics around the state and at higher cost in pysicians offices each year. In 1976 300,000 dosages of influenza vaccine were released by the Iowa Department of Health, through resources provided by the federal government under a flu vaccine initiative. The efficacy of flu vaccine is low and does not justify an annual state expenditure of 100,200 to immunize more of the "at risk" population at this time. However, the Department will continue to apply for and receive additional federal monies under new flu vaccine initiative. The federal dollars for flu vaccinations are expected to increase.

The Infectious Disease Control Section of the Disease Prevention Division of the State Department of Health maintains its function by means of surveillance, investigation and education. Reports of disease are received and processed by

the epidemiology secretary. Cases that require follow-up are given special attention and are investigated either by Public Health Nurses, Public Health Field Representatives or other State Health Department officials.

STATUS GOAL 18: NEAR ERADICATION OF THE SEVEN COMMUNICABLE DISEASES RECOMMENDED FOR IMMUNIZATION IN PERSONS LESS THAN 18 IN ORDER TO LESSEN COSTLY AND PREVENTABLE MORBIDITY.

Objective 1: By 1982, limit the annual incidence rate of these seven immunizable communicable diseases to no more than the following:

Measles and Rubella - .33 cases/10,000 population
Polio - 0 cases/10,000 population
Diptheria and Tetanus - no more than .01 cases/10,000 population (one case each per year)
Mumps - no more than 1.67 cases.10,000 population (500 cases per year)
Pertussis - no more than .04 cases/10,000 population (10 cases per year)

STATUS GOAL 18: REDUCED INCIDENCE OF MORTALITY FROM INFLUENZA AND INFLUENZA RELATED PNEUMONIA AMONG THE ELDERLY, INFANTS AND CHRONICALLY ILL SUCH THAT OPTIMAL HEALTH AND LONGEVITY IS MAINTAINED AMONG THESE POPULATIONS.

Objective 1: By 1982, no more than three deaths/10,000 population from influenza. (90 deaths)

In 1974 the rate was 3.8/10,000 persons and 108 deaths occurred.

Objective 2: By 1982, reduced incidence of reported cases of influenza from 175 cases/10,000 persons to 140 cases/10,000 persons (42,054 cases in the population).

SERVICE GOAL 19: IMMUNIZATION LEVELS IN THE POPULATION AGAINST DIPHTHERIA, RUBELLA, RUBEOLA, POLIO, TETANUS, MUMPS AND PERTUSSIS (WHOOPING COUGH) IN ORDER TO PREVENT THE SICKNESSES DISABILITIES RESULTING FROM INDIVIDUALS CONTACTING THESE DISEASES.

Objective 1: By 1982, 90 percent of the population immunized against the seven recommended immunizable communicable diseases.

LRRA 1: Continue to enforce Iowas immunization law.

Objective 2: By 1985, teenagers and women in Iowa have adequate immunity to rubella.

LRRA 1: The SDOH will through enforcement of the immunization law to seek that schools keep records of immunization of all high school women and offer referring for immunization.

SERVICE GOAL 20: AN INCREASED NUMBER OF CHRONICALLY ILL AND OTHER HIGH RISK RESIDENTS IMMUNIZED AGAINST INFLUENZA AND INFLUENZA-LIKE DISEASES AND PNEUMONIA IN ORDER TO PREVENT UNNECESSARY MORBIDITY AMONG THESE POPULATIONS.

Objective 1: By 1982, 70 percent of chronically ill or high risk individuals (approximately 400,000 residents) immunized each year against the more prevalent virulent drift of influenza virus with the vaccine recommended for use during that year.

LRRA 1: SDOH will develop a plan for statewide eradication of immunizable communicable diseases in cooperation with physicians in Iowa (see 314(d) grant application).

Objective 2: By 1982, a program for pneumonia vaccinations in Iowa.

References - Immunization

1. Disease Preventions Health Promotion: Federal Programs and Prospects, PHS, DHEW, 1978, p. 127

Hypertension

STATUS

Indicators

- hypertension by prevalence rates by related deaths
- hypertension by related diseases
- hypertension by precipating factors

Hypertension is generally defined as high blood pressure. High blood pressure is a systolic (contracting pressure of at least 160 mmHg or a diastolic (dilation) pressure of 95 mmHg. These guidelines will vary somewhat with the age of the patient. In the State of Iowa, about 18 percent, or about 500,000 adults between 18-74 years of age are hypertensive and another 22 percent, or about 611,000 adults, are assumed to be borderline hypertensives.

In 1977, only eight Iowans, or 3.3/100,000 persons, had hypertension listed as the primary cause of death.

While hypertension is not a primary cause of death, it is a major secondary cause. Hypertension is the primary risk factor for strokes, which are the third leading cause of death in Iowa.

Related diseases

Hypertension precipitates other disease states such as congestive heart failure renal insufficiency, cerebrovascular disease and arteriosclerosis. Heart disease is the leading cause of death in Iowa, killing about 11,000 Iowans each year. Arteriosclerosis is the sixth leading cause of death in Iowa, killing between 500 and 600 Iowans each year. Strokes, arteriosclerosis and heart disease caused 53% of all deaths in 1978.

Hypertension damages the heart by increasing its workload. Hypertension stresses arteries and veins by increasing pressure upon them. Since hypertension is usually asymptomatic, its damage is usually not immediately perceived.

Prevention of circulatory disorders and premature deaths is related to certain lifestyle, genetic, environmental and medical factors. Specific elements of these four factors which increase the risks of developing circulatory diseases are noted in Table 4.

Hypertension is generally defined as high blood pressure. The paramete qualify this condition include a systolic (contracting) pressure of at least 160 mmHg or a diastolic (dialation) pressure of 95 mmHg. These guidelines will vary somewhat with the age of the patient. In the State of Iowa, 18 percent, about 500,000 adults 18-74 years of age are estimated to be hypertensive and another 22 percent are assumed to be borderline hypertensives. See Appendix II for table further describing the incidence of hypertension in Iowa.

Prevention of circulatory disorders and premature deaths is related to certain lifestyle, genetic, environmental, medical factors, as pointed out in ANALYSIS OF STATEWIDE POLICIES AFFECTING PREVENTATIVE SERVICES. Specific elements of these four factors which increase the risks of developing circulatory diseases are noted in Table 4.

TABLE 4

RISK FACTORS FOR CIRCULATORY DISEASES

	LIFESTYLE									Biology	Environment		Medical			
Problem Areas	Diet-Excess salt/ Saturated Fats	Cigarettes	Alcohol	Diabetes/High Blood Sugar	Stress	Obesity	Sedentary Living	Driving Habits	Hypertension	Genetics/Family/ History/Sex/Age	Environmental Risks Pollution	Occupational Hazards	Unnecessary Surgery	Overtreatment	Lack of Diagnosis and Treatment	Other Determinants
Circulatory Diseases	X	X		X	X	X	X			X	X	X			X	
Diseases of the Heart	X	X		X	X	X	X		X	X	X				X	Psychosocial Tension Atherosclerosis
Hypertension	X	X		X	X	X	X		X	X	X				X	Same as Above
Arteriosclerosis	X	X			X	X	X								X	Serum Lipids
Cerebrovascular Diseases	X			X	X	X			X						X	
Other Diseases of Arteries and Arterioles																

It must be stressed that having one of these risk factors does not necessarily indicate circulatory disease, or, guarantee it will develop. However, persons with these factors are more likely to develop circulatory disease than those without. There is also a compounding effect involved. The more indicating factors a person has the better the chances for developing circulatory disease.

While prevention through exercise, diet, and stress control is the first way to avoid hypertension. However, evidence exists that drug therapy can prevent adverse outcomes of hypertension once it occurs. The great majority of persons in the U.S. with high blood pressure are not under satisfactory long term treatment: many are not identified as hypertensive, many who are identified are not treated, and many who are treated are not treated effectively. (Diagnosis and Management of Hypertension, p.1) The onset of hypertension normally begins at an early age.

Healthy People (HEW, 1979) estimates the proportion of United States citizens who have hypertension and are aware of their disease at 70%.

As a result of federal government and voluntary efforts between 1972 and 1974 the percentage of hypertensive adults who received treatment went from 15% in 1972 to 30% in 1974. The increased percentage of persons on medication for hypertension was probably largely responsible for a 25% decrease in the mortality rate due to strokes between 1972 and 1976.

Populations at risk for having hypertension or having hypertension and not being on medication are:

- Blacks -- said to be at epidemic proportions, the hypertension rate for black adult women is 29%. Blacks are three times as likely as whites to have severe hypertension (11% vs. 4%)
- Women -- two times as likely to be hypertensive
- Rural residents -- recent blood pressure control efforts have been concentrated in urban settings
- The obese -- also at risk for diabetes and heart disease; reduced weight is associated with lowered blood pressure
- Persons who ingest excessive salt (1)

In general, hypertension is precipitated by a combination of environmental, lifestyle and biological factors, so no major, single breakthrough will eliminate hypertension, at least in the immediate future.

SYSTEMS

Indicators

- Federal policies by enabling legislation by programs, by Strategies
- State policies by enabling legislation by barriers

Federal Policies

Public Health Services Act, Title __ - gives funds to the State for hypertension control programs (since 197__).

The Administration on Aging, through the funds for well elderly screening, also supports hypertension control.

Objectives for the Nation prioritizes these measures:

- Education/Information - low technology metnods which have shown to be highly cost effective
- Services - assessing sodium content in food and water, doing away with co-payment on Medicaid and Medicare for anti-hypertensive drugs - effective but of modest impact
- Technology - changing food content, especially for school children, and planning tied to in depth problem analysis for systems change
- Economics - reduce barrier to full use of allied health personnel, provide tax incentive to produce lower fat, calorie and salt containing food -- effective but difficult to achieve

Specific national objectives to be accomplished by 1990 in Objectives for the Nation are:

- Sodium and caloric content labeling of 90% of processed foods sold in grocery stores

- Develop ongoing data on incidence of hypertension, coronary heart disease. hemorrhagic and occulsive strokes, and by 1985, a system for measuring incidence of these diseases
- 90% of adults able to state whether their blood pressure is normal or elevated
- Not less than 60% of hypertensives on successful long term control
- Reduce by 50% every five years (1972 is base year) percent of persons with diastolic pressure greater than 104 mmHg
- By 1985, a methodology for assessing categories of hypertension control and a national baseline study.

State Policies and Programs

Legislation

Since 1975, the legislature has appropriated state monies for well elderly clinic demonstration projects.

Since 1976, through federal grants, the Iowa State Department of Health has funded hypertension control programs throughout the State.

In fiscal year 1980, the State Department of Health applied for and received $187,793 for hypertension prevention, referral and treatment, and public and professional education, from monies allocated through the Public Health Service Act.

Programs and their Strategies

Educational strategies

Hypertension is the most debilitating circulatory disease for which specific health care preventive services--early detection and treatment--exist. However, the most effective way to prevent premature death from circulatory diseases is to promote health, not to treat the symptomatic disease. According to Table 1 on page 57, about 60% of the years of life lost due to heart disease, the leading cause of premature deaths in Iowa, is due to lifestyle and environmental factors.

Promotion strategies to affect eating, smoking, and exercising habits, and to change our social and physical environment--that intercede early in life to delay the onset of chronic circulatory diseases--are the most effective ways to prevent hypertension.

Preventive service-strategies

Once hypertension is symptomatic, screening of at-risk persons, and follow-up and treatment of those persons with elevated readings prevent those other chronic conditions associated with hypertension.

Follow-up services must tie special screening programs to the physicians who provide treatment.

Programs and their Strategies

Well elderly clinics

Well-elderly clinics serve, like child health clinics, as a point of entry to

health care services for those elderly persons who, for financial or other reasons, do not seek physical "check-ups" or screening from a family physician.

Well-elderly clinics screen, educate, and refer as needed to other services. Health problems for which well-elderly clinics screen persons include hypertension, anemia, visual problems, hearing impairments, cancer, and chronic conditions. Hearing impairments pose a health problem of which elderly are often unaware. Loss of hearing is common as one ages and hearing impairment screening should be a part of every well-elderly clinic unless such screening is already available in the service area. Experienced public health nurses or nurse practitioners, who have back-up physician consultation as needed, head the clinics. Fees are usually on a sliding scale. Ideally, each county should consider the need for well-elderly clinics within its boundaries.

Well-elderly clinic screening services are widely available throughout Iowa Presently, thirteen State Department of health funded well-elderly demonstration projects serve Iowans in Audubon, Black Hawk, Calhoun, Pocahontas, Dallas, Warren, Des Moines (county), Dubuque (city), Hamilton, Ida, Jefferson, Poweshiek, Hardin, Marshall, Tama, Polk, Scott, Worth, and Winnebago Counties. Other well-elderly screening programs similar to those funded with state monies are operated on county or other funds in Story (city program), Cherokee, Jones, and Dubuque counties. Additionally the University of Iowa, Iowa Wesleyan, and the Area Agencies on Aging sponsor well-elderly programs. There are also a few counties, Clinton, Appanoose and Story (county program) among them, which offer elderly screening programs which are less extensive than those previously mentioned. Church groups around the state also offer, sporadically, short-term elderly assessment clinics. Many elderly who can afford regular physician visits are screened by private physicians.

Through the end of 1976, there were almost 300 clinics held with 3,176 individuals seen. The age and sex of those served is shown in more detail in the appendix.

Start-up costs for a well-elderly clinic will vary among counties depending on a number of factors, including the number of public health nurses in the clinic and the experience they have had in this type of detection activitly. In general, basic equipment costs have been around $1,500to $2,000 per clinic. In some instances, additional personnel training costs have amounted to $1,000. Well-elderly clinics are now funded through the Iowa State Department of Health, the Commission on Aging, private sources and county and city funds.

An analysis has been made of the ongoing costs of the well-elderly clinics. The analysis focused on costs regardless of whether they were paid from project funds. The costs included nurses' time, clerical time, fringe benefits, travel, consumable supplies, identifiable rent, telephone, postage or miscellaneous costs, and when applicable, nurse practitioner consultant costs. The analysis usually did not include the cost of follow-up. It also did not include the time of personnel from other agencies, such as Social Services. The average per visit applicable, nurse practitioner consultant costs. The analysis usually did not include the cost of follow-up. It also did not include the time of personnel from other agencies, such as Social Services. The average per visit cost was around $38 in 1979. Consistently throughout the projects, one-half the cost was for nursing salaries (not including fringe benefits). The remainder was distributed among the other items mentioned above. Costs of this kind of service, however, should be balanced against costs for institutionalization which might be avoided through increased utilization of detection services.

Based on the activity in the demonstration clinics, the following estimate could be made regarding expanded well-elderly clinic activities in Iowa. If there were sufficient projects to serve 30,000 Iowans over age 60, the cost of clinic activities would be about $1,140,000 per year. (This does not include start-up costs, follow-up costs, or nurse practitioner consultant costs.)

Iowa Hypertension Services Program

Mainly administered through county health departments, funds of the Iowa Hypertension Services Program during fiscal year 1977 identified 4,169 or less than 1% of the estimated 500,000 Iowans who are hypertensive. Of the 41,445 persons screened that fiscal year, 10.1% were hypertensive. Follow-up of persons with high blood pressure conducted in conjunction with the screening programs resulted in 63.5% or 2,626 persons seeing their physicians. In fiscal year 1980, $187,793, all of which were federal monies, made up the budget of the Iowa Hypertension Services Program.

Preventive health education and information dissemination about hypertension are also carried out through local hypertension screening programs funded through the state.

How many of the 98-99% or 495,000 hypertensives who are not reached through the well-elderly clinics or the Iowa Hypertension Services Program receive treatment services through private physicians or volunteer screening clinics is not known. National estimates place only 30% of all hypertensives under medical control, but an estimated 70% of all hypertensives aware of their disease.

More effective follow-up, referral and education are needed, if those estimated 70% or 300,000 adults in Iowa with hypertension which is not under control are to be free from the debilitating chronic conditions (and associated health care costs) which hypertension precipitates.

However, to lessen the high prevalence rate of hypertension among Iowa's adults in the future, education which changes the behavior (eating, smoking, exercise habits) and the environment (stress, pollution) of Iowa youngsters is the most needed strategy.

STATUS GOAL 21: REDUCED PREVALENCE OF HYPERTENSION AND OTHER CHRONIC CIRCULATORY DISORDERS AMONG IOWANS, ESPECIALLY AMONG AT-RISK POPULATIONS--BLACKS AND RURAL RESIDENTS.

Objective 1: By 1985, sodium consumption reduced by 10% among the Iowa population.

Objective 2: By 1985, obesity reduced by 10% among the Iowa population.

SYSTEMS GOAL 21: INCREASE THE NUMBER OF "AT-RISK" RESIDENTS USING EDUCATIONAL, EARLY DETECTION AND FOLLOW-UP SERVICES FOR HYPERTENSION AND OTHER CHRONIC CIRCULATORY DISEASES

Objective 1: By 1981, at least 60,000 Iowans screened annually through screening programs funded by the State Department of Health.

LRRA 1: See State Project Grant Proposal for Iowa Hypertension Services Programs.

Objective 2: By 1982, 35% of all blacks 21 years of age and over, or approximately 6,000 persons, screened for hypertension annually through screening programs funded by the State Department of Health.

LRRA 1: The Renal Disease and Hypertension Section will provide blood pressure education and training to specialty nursing/community groups in 5 or 10 Iowa counties which have a black population of over 400 persons.

Sources

1. Healthy People, PHS, DHEW, pp. 97-98

Chapter Four

Primary Care

ANALYSIS OF STATEWIDE POLICIES AFFECTING PRIMARY CARE

- Description of System -

Quality health care in the United States has been largely taken for granted by the general public. People do not appear to think about the issues surrounding the delivery of that care but instead rely on the fact that it will be accessible in the event of a personal health crisis. Matters surrounding the availability of health professionals, emergency delivery systems, new drugs, advanced technology, and immediate access to a continuum of services are given little consideration until the need for those services has a personal impact.

Primary Care is the phrase used to describe the entry point at which individuals initially seek health services. It is defined as an individual's initial contact with the health system for limited care and services concerning a particular health incident. Primary care includes the coordination of any service pertaining to the treatment of that illness. When looking at health care as a continuum of services, it can be seen by this definition that primary care affects or is a part of every type of health care. What does this mean to the people that are utilizing these services and particularly what does this mean for Iowa residents?

The availability and accessibility of health care services are affected by the predominantly rural nature of Iowa's population. The demand for these services must be in part balanced with their feasibility in terms of cost to the individual and to the delivery system. Recently this issue of health care costs has been a priority news item. It has been demonstrated (see Acute Care Chapter, (Table on page 247) that health care costs are rising at an increased inflationary pace as opposed to other items. These inflationary rises in health care costs have particular impact on the rural population. This, in conjunction with the fact that Iowa has one of the highest percentages of elderly in the United States, (third in the nation), affects many decisions relating to health care and its delivery.

Present 1981 population projections obtained from the Iowa State Office for Planning and Programming (Series, May, 1979) cite the Iowa 60+ population as 519,064. The projection figure represents 17.7 percent of the total Iowa population of 2,931,558 in 1981. The geographic distribution of these elderly individuals impacts on the decision of available health services. As can be seen by the map (Source: State of Iowa Commission on Aging) in Appendix 1A, 62% of Iowa elderly live in rural areas of 10,000 people or less. Since the elderly have a higher incidence of illness as well as more frequent need for intensive and longer stay care, the issue of considering the elderly in studies of the financial feasibility of supporting health care professionals in these areas becomes a significant factor. With a lower financial base due to a sparseness of population in rural areas along with a high proportion of elderly, certain specialized services, particularly those that are youth related, may not be as available as the residents of an area would want and expect.

As indicated above, Iowa does have unique characteristics which need to be examined and dealt with when providing primary care and health care in general. The definition of primary care cited brought out the fact that it is the initial contact for health service for any particular health incident. Thus, "primary care" includes a full range of services - prevention and detection, problem diagnosis, community-based treatment, counseling, and referral - and is connected to all levels of care. The area of prevention and detection includes services

of all health education, preventive medicine, and other routine care. Problem diagnosis includes medical and physical diagnosis, laboratory testing, diagnostic radiology, psychological testing, and social histories. Community based treatment includes emergency stabilization, medical intervention, outpatient surgery, general minor acute problem treatment, as well as other general treatment on an outpatient basis. Counseling also is a part of primary care and includes services to individuals, families, and groups.

The referral component of primary care is seen as essential to the coordination of all other health services. It is the link between primary care or initial contact and acute care, long-term care, and prevention and detection. Since most referrals at the primary care level are made by the general or family practitioner, their involvement in the coordination of a comprehensive health service is essential. Recognized is the fact that the general or family practitioner (which is a physician specialty) is able to diagnose and treat the majority of cases seen by them and referral of those other cases is just an extension of the service they offer.

Primary services are provided in a variety of settings: physician, dental, and other health professional offices; health maintenance organizations; health clinics; community mental health centers; mental health institutes; county care facilities; substance abuse treatment centers; maternal and child health centers; hospitals; pharmacies; mobile clinics; emergency service units; homes; schools; workplaces; as well as other community settings.

The number and type of health professionals included in primary care is also extensive. Professionals who provide primary care are: general and family practice physicians (internist, obstetricians/gynecologists and pediatricians do provide some primary care in the course of their practice), physician's assistants, nurse practitioners, pediatric associates, registered nurses, nurses aides, home health aides, medical and social workers, public health nurses, community health aides, patient advocates, dentists (recognizing that there are dental specialities which do not regularly provide primary care), mental and substance abuse counselors, chiropractors, nutritionists, health educators, emergency medical technicians, pharmacists, as well as many others. Also included with the category of health professioanls are those ancillary personnel needed for the provision of complete health care. Examples of such ancillary personnel are: administrators, health planners, laboratory assistants, etc.

Given a rural, elderly population, available personnel needs to be considered in the determining of goals for the health care delivery system with regards to the health status of the population. At the present time the population both in urban and rural areas is basically stable. Due to the sparseness of population in rural areas, less funds and consumers of health care are available to support many health professionals and services. Historically these areas were served by solo practices. Through the retiring of the physicians in these practices, the need for the physician specialty of general or family practitioner is increasing. There is a shift away from the small town solo practice to partnerships or nonsolo arrangements with the convenience of shared facilities and support personnel. This provides increasing difficulty for the small community seeking a family practitioner rather than an expanded clinic or partnership arrangement. Again, the factor involved most is the economic feasibility of hiring the number of health professionals that the community can support. Many small rural communities could not support the additional manpower of a nonsolo practice, so development of group practices in rural areas tends to be in towns of county seat-size or larger. To further encourage such development, areas

are beginning to look at expanding transportation systems to bring consumers to these group practices.

Beyond the availability of consumers to support a practice, factors of peer interaction and of cultural opportunity enhance the development of these practices when available in an area. Peer interaction refers to the accessibility of other medical personnel and facilities (i.e., other practitioners, hospitals, etc.) while cultural opportunities refers to accessibility of the arts (i.e., music, theatre, etc.) and educational experiences.

The main pool of primary health personnel are physicians. Primary care physician is defined by the grouping of the medical practice specialties of general or family practitioners, internists, obstetricians/gynecologists and pediatricians. As reported in the 1979 Annual Legislative Report and Bienniel Appropriations Request of the Statewide Family Practice Training Program there were 3,104 active doctors in the State of Iowa as of October, 1978. This represented a net increase since January 1977 of 149 doctors. The following table shows the State's experience for the last two years.

Table 1

New Iowa Practices in 1977	242
Practice closings in 1977	- 170
Net Gain in Doctors	72
Active Doctors 1/77	2,955
New Iowa Practices in 1978	158
Practice closings in 1978	- 81
Net Gain in Doctors	77
Active Doctors 1/78	3,027
Active Doctors 10/78	3,104

It can be seen by the table that Iowa, during the last two years, has been able to more than replace those physicians lost due to death, retirement, or relocation. As cited in the above mentioned report, during "each of the last two years 50 percent (50%) of the doctors entering Iowa practices have been primary physicians in the specialties of family practice, pediatrics and internal medicine."

The following Table shows the current physician location statistics by county and specialty. (1) These figures differ from the total of 3,104 active doctors shown above, because they include all licensed physicians some of whom may no longer practice or are in an advisory capacity.

In Chapter 38C of the Code of Iowa there is a provision for the training of physicians to replace and reduce physician shortages. For further information concerning this program, see the description of the Statewide Family Practice Training Program in this chapter under "Programs Aimed at Implementing State Health Policies."

POLICIES RELATING TO PRIMARY CARE

Health Personnel Resources

A. Primary medical care manpower shortage area designation (for example see end of chapter for IHSA Primary Medical Care Personnel Shortage Areas) is defined in the Public Health Service Act by three criteria:

1. The area is a rational (logical) area for the delivery of primary medical care services

2. One of the following conditions prevails within the area:

   a) The area has a population-to-primary care physician ratio of at least 3500:1, or

   b) The area has a population-to-primary care physician ratio of less than 3500:1 but greater than 3000:1, and has either unusually high needs for primary medical care services or insufficient capacity of existing primary care provided.

3. Primary medical care manpower in contiguous areas are overutilized, excessively distant, or inaccessible to the population of the area under consideration. (Federal Register, Vol. 43, No. 6, 1978)

B. An identified national priority is the training and increased utilization of physician assistants, especially nurse clinicians. (National Health Priority, 1974)

C. Physician assistants and nurse practitioners who work in defined rural health clinics in designated manpower shortage areas will receive Medicaid reimbursement through the same rural health clinics for services provided. (Federal Register, Vol. 43, No. 63, 1978)

D. The State Department of Health shall issue certificates of approval for programs for the education and training of physician's assistants which meet board standards. (Chapter 148B, Code of Iowa)

E. There is established a state-wide medical education system for the purpose of training resident physicians in family practice. The Dean of the College of Medicine shall be responsible for implementing the development and expansion of residency programs in cooperation with the medical profession, hospitals and clinics located throughout the state.

F. The University of Iowa provides for the training of personnel for the practice of dentistry.

G. "A county or affiliated counties having a total or combined population of thirty-five thousand or more may by action of the board or board of supervisors, with aproval of the Iowa Mental Health Authority, establish a community mental health center to serve the county or counties."

Financing Mechanisms

Comprehensive health services should be readily accessible to all citizens of the state. (1978 Iowa State Health Plan)

All facilities shall serve aid-recipient and indigent patients irrespective of their ability to pay. (Social Security Act and Hill-Burton Act)

Physicians should be encouraged to treat patients in the least costly mode of treatment consistent with safety (e.g., day surgery, preadmission testing, ambulatory care) standards, and hospitals should be encouraged to provide alternative settings.

(Public Law 93-641, Title XI, Part B of the Social Security Act)

At the present time third-party reimbursement is generally provided for inpatient treatment rather than for same treatment in an outpatient setting. (Inherent in majority of insurance policy coverage). (Desired change in this policy would be for priority reimbursement to be given for outpatient setting whenever more appropriate than inpatient.)

Alternatives

As an alternative to present health delivery systems the investigation and development of health maintenance organizations (HMOs) is encouraged. (HMO Act of 1973, Public Law 93-222, and Title XIII of the Public Health Service Act.)

PROGRAMS AIMED AT IMPLEMENTING STATE HEALTH POLICIES

Health Personnel Resources

A program aimed at the reduction of a family doctor shortage in Iowa is the Statewide Family Practice Training Program. The goals of the programs are as follows:

1. To attract medical graduates, particularly Iowa graduates, into careers in family practice;

2. To increase the number of Iowa-based training positions available to medical graduates interested in family practice;

3. To utilize existing community medical resources for graduate medical education;

4. To increase the number and improve the geographic distribution of family physicians selecting Iowa practice sites;

5. To provide educational support through the College of Medicine to the faculty of community-based training programs;

6. To enrich the educational environment of regions where graduate training programs are located--making such areas attractive as places for physicians of all specialties to practice.

The following table lists the current enrollment of each program participating in the Iowa Family Practice Program. As can be seen, 58 are in their first year of training, 54 are in their second year of training and 47 are in their third year of training.

The rate of attrition of residents in their residency training is only four percent (4%). Compared to national statistics, Iowa's attrition rate is only half that experienced by other family practice programs for two of the last three years.

RESIDENT SUMMARY Table 3

IOWA FAMILY PRACTICE RESIDENCY PROGRAMS
1978-1979

Program	Number of Residents			
	R1	R2	R3	Total
Cedar Rapids	8	8	8	24
Davenport	8	7	6	21
Des Moines - Broadlawns	10	11	9	30
Des Moines - General	2	2	0	4
Des Moines - Iowa Lutheran	8	8	7	23
Iowa City - Univ. of Iowa	9	8	10	27
Mason City	4	4	2	20
Sioux City	5	5	5	15
Waterloo	4	1	0	5
Total	58	54	47	159

Experience has shown that approximately 25 percent (25%) of graduates of the University of Iowa College of Medicine select careers in family practice. This compares favorably with national figures of 14 percent (14%) in 1978. Since general and family physicians do provide extensive primary care services as compared to other physicians' specialties, this rate of graduating family physicians should have a particular impact on reducing primary care physician manpower shortages. This, coupled with the fact that since the 1976 graduating class, 56 percent (56%) of the graduates chose to practice in Iowa, will further help reduce primary care physician shortages. Also, Des Moines General Hospital, an osteopathic institution, has an internship and residency program which places osteopathic physicians in both urban and rural communities for the practice of medicine and surgery.

Nationally, it was recognized by the government that each state had certain demographic, service connected characteristics which presented problems unique to that state. To try to develop programs which would specifically address themselves to each state's unique characteristics, health personnel shortage area designations were to be identified by each state.

Due to the ever changing qualities of personnel resources, these designated areas can be redefined through application. It is a job of the local health systems agency and the State Health Planning and Development Agency to assist in the application of new or altered designation areas. (See Health Personnel Resources Policy cited earlier in this chapter).

This area designation is necessary for the area to qualify for certain federally sponsored programs aimed at the remediation of any health personnel service shortages. Federal grant programs such as Rural Health Initiative (RHI), Health in Underserved Rural Areas (HURA), and Urban Health Initiative are established to provide incentives to develop clinics in areas for the reduction of personnel shortages. Communities may also apply for National Health Service Corps personnel to work in these designated areas. When an area is so designated physicians extenders, as physician assistants or nurse practitioners, may be reimbursed through the clinic in that area for their services by Medicare and Medicaid if they practice in a certified rural health clinic.

A state program aimed at the reduction of these health personnel shortages is the Iowa Physician's Assistant Program at the University of Iowa. The training and placement of these physician's assistants (PAs) will further reduce the shortage of medical personnel by extending the service capabilities of the supervising medical physicians. The 1978-79 Iowa Health Systems Plan described the usual duties of physician assistants as follows:

> "to elicit a comprehensive health history, perform a comprehensive physical exam, perform diagnostic laboratory determination, and make an appropriate clinical response to commonly encountered medical care situations." (Iowa Health Systems Plan, p. 151)

For someone to practice as a physician's assistant, Iowa requires an individual to complete a P.A. training program and successfully pass the National Certifying Examination for Physician's Assistants. Exceptions from this registration requirement are individuals that work in state or federal hospitals (e.g., Veterans Administration Hospitals). In addition, the P.A. is required to take continuing medical education each year as well as be re-examined every six years by the National Commission for Certification of Physician's Assistants.

As an added incentive for the utilization of physician's assistants (and nurse practitioners) in shortage areas, the government has authorized their reimbursement for services if they serve in a certified rural health clinic.

Certification is done by the Iowa Department of Health. This is a major step toward the increased acceptance and utilization of these allied professions. A pitfall is the way in which the definition of rural health clinic (See Federal Register, Vol. 43, No. 27, 1978) drastically limits the setting in which these personnel can be utilized and still receive the reimbursement. In Iowa there are nine clinics that do qualify to allow for this reimbursement.

Those clinics are as follows:

Eastern Iowa Rural Health Services Clinics - Wheatland, Iowa
Family Health Center - Albert City, Iowa
Family Health Center - Toledo, Iowa
Jesup Medical Clinic - Jesup, Iowa
LaPorte City Medical Clinic - LaPorte City, Iowa
Lowden Family Medical Clinic - Lowden, Iowa
Panora Medical Clinic - Panora, Iowa
Randolph Rural Health Clinic - Randolph, Iowa
Winthrop Clinic - Winthrop, Iowa

Currently there are 117 physician's assistants. Approximately 67% of these graduates are employed in office-based settings with approximately 83% of these practicing in a primary care specialty.

Another state program aimed at the reduction of health personnel shortages is the nurse practitioner program at the University of Iowa. This program is involved with the training of RNs in the specialty of pediatric nurse practitioner. This program is important for increasing the availability of this specialty in Iowa. The 1978-79 Iowa Health Systems Plan describes the usual duties of nurse practitioners as follows:

> "history taking, diagnosis and treatment under protocols established by physicians, interpretations of tests, and provision of supportive services to restore health."

As with the before mentioned physician's assistant, the nurse practitioners extend the service capabilities of the supervising medical physician and are capable of receiving Title XIX reimbursement when working in a defined rural health clinic in a health personnel shortage area. Unlike the physician's assistant there are currently no special licensing requirements for nurse practitioners. The only prerequisite is that the person have a RN license to practice in the State of Iowa.

Currently there are 21 family nurse practitioners of which approximately 13 of these are also registered physician's assistants.

The importance of developing programs which utilize physician's assistants or nurse practitioners to the extent that they are qualified is twofold. First, as cited above, is the fact they can assist in the reduction of health personnel shortages. Their abilities enable the physician to expand the amount of service that can be offered in that service area. An additional factor is the effect the utilization of these types of personnel will have on the overall cost of health care Given that the P.A. will be working within a limited scope of service, the cost of that service should be less than the cost of the more extensive services offered by the physician. Since the P.A. is an extension of physician's services, appropriate referrals to the physician assures quality of care.

- System Goals and Objectives -

GOAL 1: COST EFFECTIVE HEALTH CARE THROUGH AVAILABILITY OF AND ACCESSIBILITY TO COMPREHENSIVE PRIMARY CARE SERVICES FOR ALL IOWA RESIDENTS.

Objective 1: Increased employment of physician's assistants graduating from the University of Iowa's Physician's Program to accomodate approximately 75% of each year's graduating class in Iowa.

LRRA 1: Iowa Health Systems Agencies work with communities and the DHEW Regional Office in designated shortage areas to establish health centers supported by RHI, HVRA, or similar funds.

LRRA 1a: The Department provide Iowa data necessary for the Health Systems Agencies for the designation of shortage areas.

LRRA 1b: The Department shall work to identify shortage areas (as defined in Federal Register, Vol. 43, No. 6, 1978) in Iowa in cooperation with area Health Systems Agencies and make recommendation for designation to DHEW.

LRRA 1c: The Physician's Assistants Program of the University of Iowa will coordinate efforts to assist and encourage physicians to employ and utilize physician's assistants.

Objective 2: If by 1985, independently Licensed physician extenders are legally practicing, they will be directly reimbursed by third-party payors in Iowa.

LRRA 2: By 1983, the Department will assist the Iowa Board of Nursing in the implementation of rules relating to the practice of nurse specialties which will encourage third-party payment for those nursing specialties.

In Iowa a "Busyness Index" was surveyed and then reported in the Iowa Dental Demographic Profile 1978. To the question "Not busy enough -- would like more patients", the percentage which answered "yes" increased from 11.7% in 1973 to 18.5% in 1978. (2) This might be indicative if the demand would move closer to the actual need level dentists would be able to successfully treat the increased clientele. Factors as the rural nature of Iowa as well as increased elderly population might affect this accessibility but in general it would appear that Iowa's dentistry manpower is now and would be (due to increased clientele) responsive to the demand for services.

"Primary care dentistry involves the prevention, diagnosis and treatment of dental disease, maintenance of dental health, and referral and coordination of episodic specialty care." (3) Services primarily provided by dentists and dental assistants. In Iowa, as reported by the Iowa Demographic Profile 1978, general practitioners make up 86% of practicing dentists which is comparable to the national figure of 86% (1977 data, U.S. Department of Health Education and Welfare, Public Health Service, Dental Manpower Fact Book, March 1979). The amount of services provided by dentists appears to be a function of the age of the dentists as well as the number of and use of dental auxiliaries (dental hygienists and dental assistants). Also note that availability and accessibility would affect utilization of these services but presently only the provision of services will be addressed. The average number of patient visits per dentist per week is 72.5. But in looking at the following table we see the percentage of provided services is very much affected by the age of the dentist (Table 4). By looking at the next table (Table 5) we can see dental utilization is a function of the number of dental auxiliaries the dentist employs. Approximately 30% (of the dentists responding to the survey) employed dental hygienists while 78% employed dental assistants. (4) (See later discussion regarding dental auxiliaries.)

Table 4

% PATIENT VISITS PER WEEK TO DENTIST BY AGE OF DENTIST

AGE

	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	Over 75	
% Total Visits												TOTAL
	8.6	15	12.6	11.4	13	10.9	11.7	7.2	3.5	2.8	3.3	100

Table 5

Visits/yr	Dentists with
2205	No auxiliaries
2940	1
3528	2
4067	3
4655	4+
4655	4+

Source: James Abe, Relationship Between Number of Auxiliaries per Dentists in General Practice and Certain Dental Practice Characteristics, Unpublished Report DHEW, May 1975. (Iowa Health Systems Plan 1980-85, p.163)

According to 1978 dentist licensure data (See Table 6) there appears to be some differences in availability of dentists depending on the county in which one resides. According to the January 10, 1978 Federal Register any area which has a population to practitioner ratio of greater than 5000 to 1 has a dental manpower shortage area. The licensure data table only shows population to practitioner ratios as they reflect in any one Iowa county. For purposes of federal shortage area designation any area can be a rational area and not just restricted to county boundaries.

Table 6

AVAILABILITY OF OFFICE-BASED DENTAL SERVICES
IOWA HSA, 1978

SUBAREA 1	Estimated 1978 Pop.	Total Number of Dentists*	Number of Dentists Age 65+	Pop. Per Dentist
Allamakee	15,958	7	3	2,280
Black Hawk	139,794	55	4	2,542
Bremer	24,194	12	2	2,016
Buchanan	22,750	5	0	4,550
Butler	17,123	3	0	5,708
Cerro Gordo	48,047	29	4	1,657
Chickasaw	15,344	2	0	7,672
Clayton	20,464	8	2	2,558
Fayette	25,374	7	0	3,625
Floyd	20,082	9	2	2,231
Franklin	13,256	5	2	2,651
Grundy	13,951	4	0	3,488
Hancock	13,639	5	3	2,728
Hardin	21,153	9	0	2,350
Howard	11,156	4	1	2,789
Kossuth	22,867	7	1	3,267
Mitchell	12,740	5	1	2,548
Tama	20,043	5	1	4,009
Winnebago	13,573	7	0	1,939
Winneshiek	21,607	11	3	1,964
Worth	9,071	2	0	4,536
SUBAREA 1 TOTAL	522,186	201	29	2,598
SUBAREA 2				
Buena Vista	20,242	9	0	2,249
Cherokee	16,492	6	0	2,749
Clay	19,367	14	1	1,383
Dickinson	14,478	8	1	1,810
Emmet	13,854	8	1	1,732
Ida	8,845	3	0	2,948
Lyon	13,177	2	1	6,588
Monona	12,063	3	0	4,021
O'Brien	17,316	6	0	2,886
Osceola	8,238	2	0	4,119
Palo Alto	13,326	4	1	3,332
Plymouth	24,309	10	3	2,431
Sioux	29,349	9	1	3,261
Woodbury	102,739	51	7	2,014
SUBAREA 2 TOTAL	313,795	135	16	2,324

SUBAREA 3				
Audubon	9,235	4	0	2,309
Calhoun	13,739	5	0	2,748
Carroll	23,879	8	1	2,985
Cass	17,245	8	1	2,156
Crawford	18,548	7	1	2,650
Greene	12,116	4	0	3,029
Guthrie	11,982	2	1	5,991
Hamilton	17,747	6	1	2,958
Humboldt	12,403	4	1	3,101
Pocahontas	11,784	4	0	2,946
Sac	14,764	4	0	3,691
Webster	47,115	23	6	2,048
Wright	16,834	8	2	2,104
SUBAREA 3 TOTAL	227,396	87	14	2,614

SUBAREA 4	Estimated 1978 Pop.	Total Number of Dentists*	Number of Dentists Age 65+	Pop. Per Dentist
Adair	9,602	2	1	4,801
Appanoose	15,263	5	1	3,053
Boone	26,127	6	2	4,354
Clarke	8,042	1	0	8,042
Dallas	28,111	8	1	3,514
Decatur	9,528	2	1	4,764
Jasper	36,213	14	1	2,587
Lucas	10,164	2	0	5,082
Madison	12,409	4	0	3,102
Mahaska	22,520	7	0	3,217
Marion	28,485	12	1	2,374
Marshall	42,880	21	1	2,042
Polk	302,312	165	16	1,832
Poweshiek	19,393	7	1	2,770
Ringgold	6,262	2	0	3,131
Story	71,638	23	3	3,115
Union	13,359	4	0	3,340
Warren	35,031	7	0	5,004
Wayne	8,214	2	0	4,107
SUBAREA 4 TOTAL	705,553	294	29	2,400

SUBAREA 5				
Benton	23,774	4	1	5,944
Cedar	17,700	6	0	2,950
Clinton	58,397	25	6	2,336
Davis	8,619	3	1	2,873
Delaware	19,123	5	0	3,825
Des Moines	45,898	20	3	2,295
Dubuque	93,425	55	5	1,699
Henry	17,811	8	2	2,226
Iowa	15,188	6	1	2,531
Jackson	22,934	5	1	4,587
Jefferson	14,833	6	0	2,472
Johnson	80,008	32	0	2,500
Jones	19,881	6	1	3,314
Keokuk	13,245	1	1	13,245
Lee	42,362	18	3	2,387
Linn	164,657	87	10	1,893
Louisa	11,206	1	0	11,206
Monroe	9,355	2	0	4,678
Van Buren	8,569	1	0	8,569
Wapello	40,974	11	2	3,725
Washington	18,857	9	3	2,095
SUBAREA 5 TOTAL	747,416	311	40	2,403
Illowa				
Muscatine	39,343	14	1	2,810
Scott	155,753	51	4	3,054
TOTAL	195,095	65	5	3,002
Midlands				
Adams	6,175	2	0	3,088
Fremont	9,127	2	0	4,564
Harrison	16,426	3	0	5,475
Mills	12,632	3	0	4,211
Montgomery	12,918	6	1	2,153
Page	18,735	10	2	1,874
Pottawattmie	85,641	30	3	2,855
Shelby	15,140	5	0	3,028
Taylor	8,208	3	1	2,736
TOTAL	185,002	64	7	2,891

Midlands	185,002	64	7	2,891
Illowa	195,096	65	5	3,002
Iowa	2,516,346	1145	224	2,198
TOTAL	2,896,444	1274	236	2,274

SOURCE: Compiled by the Iowa HSA utilizing 1978 dentist licensure data from the Iowa and Nebraska State Departments of Health and 1973 population projections (Series May 1979) from the Iowa State Department of Health.

* Dentists providing office based patient care according to licensure survey.

As described in the January 10, 1978 Federal Register areas must meet the following criteria to be designated dental manpower shortage areas (which need to be so designated if the area is to qualify for particular federal grant programs to increase dental manpower in that area):

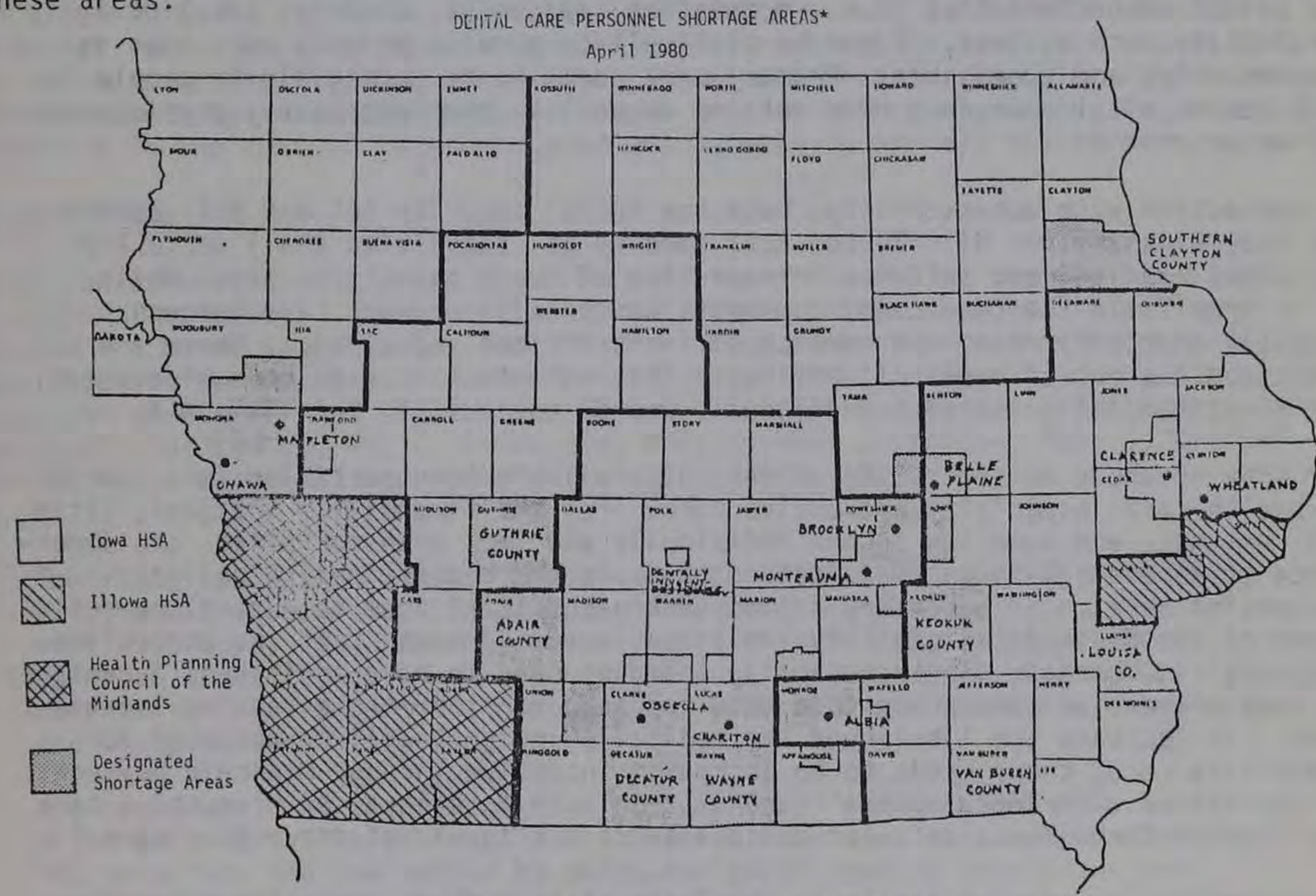
1. The area is a rational area for the delivery of dental services.
2. One of the following conditions prevails in the area:
   (a) The area has a population-to-dentists ratio of at least 5,000:1 or
   (b) The area has a population-to-dentist ratio of less than 5,000 but greater than 4,000:1 and has either usually high needs for dental services or insufficient capacity of existing dental providers.
3. Dental manpower in contiguous areas is overutilized, excessively distant, or inaccessible to the population of the area under consideration.

There is some flexibility in this definition since the idea of a "rational" service area is not bound by county lines and is left to interpretation. Excessively distant or inaccessible is defined as within 30 miles or 40 minutes travel time.

A total of 15 areas in Iowa are designated at the present time as dental manpower shortage areas. In addition to these fifteen areas the medically indigent population in Des Moines is designated as underserved. The following map shows these areas:

DENTAL CARE PERSONNEL SHORTAGE AREAS*

April 1980



* Designated by the Department of Health, Education and Welfare under Section 332 of the Public Service Act. (Source: Health Planning Council of the Midlands, Illowa HSA, Iowa HSA.)

Dental auxiliaries includes both dental hygienists, and dental assistants. The Midlands Health Systems Plan Third Edition 1980-1985 p. 4-144 describes the role of dental hygienist and dental assistants by the following:

"Dental hygienists, like the dentists, are required to be licensed in each state. Under the direction of a dentist the hygienist performs dental prophylaxes (scaling and polishing of the teeth), exposes and processes dental radiographs, applies preventive agents (fluorides) to children's teeth, and instructs individual patients in toothbrushing techniques and proper diet. The role of the hygienist is being expanded to include a wide range of services. The majority of hygienists work in private dental offices, but smaller numbers are employed by public and parochial schools, public and private clinics, hospitals and other institutions.

The dental assistant primarily assists the dentist as he provides treatment services to patients. The assistant's role includes preparation of the patient, maintaining a clear operating field, passing instruments and materials to the dentist, and the preparation of materials used in the treatment process. In some offices they assist in exposing and processing radiographs, placing and servicing rubber dams and removing sutures. The functions permitted vary from state to state."

Program Financing Mechanisms

A principle of the 1978 State Health Plan is that comprehensive health services should be readily accessible to all citizens of the State of Iowa. Because of the unique characteristics (i.e., population sparseness, elderly, etc.) of a rural state such as Iowa, it can be difficult to provide primary care that is comprehensive and accessible. Primary care needs to be accessible to people in both the hospital emergency room setting as well as the less costly physician's office or clinic.

In connection with accessibility, both the Social Security Act and Hill-Burton Act (see Glossary for Hill-Burton Act) specify all facilities shall serve aid-recipient and indigent patients irrespective of their ability to pay. While it is true Title XIX (Medicaid) consumers can receive primary care through hospital emergency rooms and some physician's offices and clinics, there are limits on the out-of-hospital settings. This situation is even more widespread for the financially indigent individuals who do not qualify for Title XIX.

For some of these consumers the absence of available transportation is a barrier to health care, especially preventive care. For the financially indigent, Title XIX consumer, and some low income individuals who lack transportation, the importance of accessibility on an as-needed basis to the nearest health delivery system for service is necessary. Some work needs to be done to expand the definition of the Medicaid eligibility limits so increased numbers of the borderline indigent can benefit. These medically indigent need to have additional incentives to seek preventive care prior to a required need for the more expensive inpatient care. To increase the likelihood the medically indigent will be accepted for preventive care, there needs to be increased incentive through Medicaid payment to physicians. (Primary medical care is seen here as a level of preventive care. See Chapter Three for a detailed discussion of the levels of preventive care.)

It is generally accepted people in the State of Iowa do not go without having their acute medical needs served. Preventive medicine, however, is a part of primary care and vital to continued good health and reduction of overall health care costs.

Health care delivery is affected by the costs of that care, costs that affect

all consumers. The Social Security Act and Hill-Burton Act address this issue of rising health care costs and how less expensive treatment/care should be substituted for inpatient hospital care when appropriate.

Curtailing rising health care costs benefits not only the low income individuals (through decreased delivery system limitations) but also those that purchase health insurance by virtue of smaller increases in insurance premiums.

Many health insurance policies cover only those services which are treated in an inpatient setting in hospitals. The consumer is constantly paying higher and higher premiums for his health care because he is forced to accept treatment in an in-hospital setting which could have been done with less cost and same quality in an outpatient or physician's office setting. Since outpatient care is not covered by insurance policies, individuals may be deterred from seeking less expensive preventive care.

It is recognized some health insurance companies are changing this policy as an alternative insurance option. These efforts to promote outpatient care payments and preventive health care are positive, but increased efforts need to be made.

It is urged insurance companies begin to provide incentives for less costly modes of appropriate treatment by reimbursing outpatient treatment whenever possible as an alternative to treatment in an inpatient setting. It is important quality does not suffer, but in those instances where treatment is identical and is done in an inpatient setting because of the financing mechanism, then the outpatient reimbursement by insurance companies might have an effect of slowing the rate of increase in the cost of insurance premiums as well as overall health care costs.

Alternatives

Cost containment in all areas of service delivery, including health, has become a national priority. As a result alternatives to the present health delivery system are being sought and tried. Several such alternatives are the prepaid health plans or health maintenance organizations (HMOs). The following narrative was developed from the article "Fee-for-Service Health Maintenance Organizations", RH, Egdahl, MD; J. Friedland, MRP; Anthony J. Mahler, MBA; D. Chapman Walsh, MS., Journal of American Medical Association, Vol. 241, No. 6, February 9, 1979.

There are two basic forms of prepaid plans: "(1) the salaried group (SG); (2) the fee for service (FFS) HMO. Both are characterized by: (1) prepayment with capitation for comprehensive health services; (2) guaranteed enrollee access to cover ambulatory and institutional care when medically necessary; (3) management structure that contracts with both the enrollees and the providers of services.

The organizational characteristics of SG HMOs differ from FFS HMOs in two principal ways: the setting in which ambulatory services are provided for HMO enrollees and the method by which the participating physicians are compensated for their professional services.

Salaried group HMOs come in two major models, staff and group practice, and provide ambulatory care from a limited number of centers or clinics. They are staffed by physicians in multispecialty group practice arrangements and supported by a broader complement of equipment and staff than is normally found in solo or small group-practice offices. In the staff model, participating physicias are professional employees of the HMO and are paid salaries.

Medical group model physicians are not employees of the HMO but contract with it through a medical group that usually accepts a fixed dollar amount per enrollee from the HMO and has the responsibility of providing medically necessary services. Customarily paid by salary, members of SG HMOs may receive year-end adjustments based on performance.

Fee-for-service HMOs contract with community physicians, either individually or through legal entities called Individual Practice Associations (IPAs), and continue to render ambulatory medical services in the offices of the participating physicians, who may be in solo practice, partnership, single-specialty group, or multispecialty group arrangements. Participating physicians are compensated on a FFS basis. For their part, enrollees are insured only for care received directly or indirectly through the plan. In many FFS HMOs, the enrollee is asked to select a single primary-care physician and to seek care only from that physician or through him, by referral to specialists." (5)

It does appear SG HMOs can provide comparable care to people at a cost equal to or lower than conventional health insurance. This is in part due to increased utilization of ambulatory settings, management structure, and decreased hospitilization. Studies also suggest some FFS HMOs have had success in reducing hospitilization (see Table 7). To better evaluate the success of these plans there is a need to do a systematic evaluation over time to analyze factors which influence the performance of these HMOs as well as time to develop the needed data for the evaluation.

Table 7

Fee-for-Service Health Maintenance Organizations*

Program, Location	Operational Year	Approximate No.		Inpatient Use, Length of Stay		Year
		Enrollees	Physicians	No. of Days, av	1,000 Members/ Days/yr	
Kitsap Physicians Service, Bremerton, Wash	1946	65,000	175	4.5	458	1976
Protecting Circle Plan, Gladstone, Ore	1970	7,700	350	4.3	481	1976
North Central Health Protection Plan, Wausau, Wis	1972	16,200	115	4.3	469	1976
Rocky Mountain Health Maintenance Organization, Grand Junction, Colo	1974	11,000	82	3.9	560	1977
ChoiceCare, Fort Collins, Colo	1974	22,000	230	3.9†	475†	1977
Physicians Health Plan, Minneapolis	1975	22,000	1,200	5.9‡	550‡	1977
Portland Metro Health, Portland, Ore	1976	11,500	900	3.8	583	1977
Marion Health Foundation, Marion, Ohio	1976	7,000	55	4.6	522	1976-1977
Southshore Health Plan, Northfield, NJ	1977	1,600	107	5.3	509	1977-1978

*From American Associations of Foundations for Medical Care," Egdahl et al," Christienson," personal communications, and statements by program representatives.

†Commercial enrollees only.

‡Nonmaternity, excluding admissions for mental health or drug-dependent conditions.

This decrease in hospitalization is a significant factor in decreasing health care costs. It is true in HMOs and other similar alternative plans (i.e., IPA) there is an increase of utilization of other parts of the system which increases costs for that sector but the savings are still substantial. It is estimated that hospitalization accounts for 40% of health care costs nationwide. Table 8 shows a comparison of hospitalization rates for HMOs compared to traditional plans.

Table 8

HOSPITALIZATION: HMOs vs. TRADITIONAL PLANS

	Type of Plan	Average Number of Hospital Days per 1,000 plan members	
TRADITIONAL PLANS	Blue Cross/Blue Shield	743	
	Indemnity Plan (private carrier plan)	741	
HMOs	Group Practice HMO	315	58% less hospitalization than traditional plans
	Individual Practice HMO	356	52% less hospitalization than traditional plans

SOURCE: A Primer on HMOs - What You Need To Know About Health Maintenance Organizations, Carnegie Press (Cooperation with American Institute of Professional Education) 1979, p.6.

For comparisons to Table 8 look at Table 9 which shows selected utilization data on HMOs which presently exist in Minnesota. Every one of the hospital utilization rates are lower than the lowest traditional plan number of hospital days per 1,000 population.

Table 9

SELECTED HMO UTILIZATION DATA

H.M.O.	Inpatient Cost Per Hospital Bed Day*		Inpatient Cost Per Hospital Discharge*		Hospital Discharges Per 1,000 Enrollees Per Year*		Hospital Days Per 1,000 Enrollees Per Year*		Average Length of Hospital Stay	
	1976	1978	1976	1978	1977	1978	1977	1978	1977	1978
Community Health Center	$119.22	$141.85	$ 973.74	$ 942.14	122.8	95.9	848.7	637.0	6.9	6.3
Group Health Association of Northeastern MN	132.14	205.86	642.64	895.48	150.6	137.2	712.5	596.9	4.7	4.3
Group Health Plan, Inc.	139.18	206.89	750.69	1,142.25	88.7	87.4	496.6	482.3	5.6	5.5
MedCenter Health Care, Inc.	221.43	227.21	925.69	1,356.96	78.9	72.4	417.9	354.6	5.3	4.8
Minnesota Health Maintenance Network Plan	178.02	328.24	953.60	1,818.60	113.4	87.9	690.3	486.9	6.1	5.5
Nicollet-Eitel Corporation	212.12	339.28	1,297.81	1,995.77	87.9	75.9	453.1	446.7	5.1	5.6
Ramsey Health Plan	187.63	286.17	1,082.39	1,843.93	83.8	96.8	709.9	623.4	7.3	6.0
Share, Inc.	175.53	229.84	1,107.04	1,139.46	81.0	85.3	388.5	422.8	4.8	4.8
Physicians Health Plan	224.84	212.79	1,245.79	1,153.12	108.7	94.3	639.6	511.1	5.9	5.3
Average	$152.93	$230.70	$ 819.29	$1,227.70	96.8	87.5	542.1	465.5	5.6	5.2

Source: Minnesota Department of Health, 1978 Statistical Report on Minnesota Health Maintenance Organization Operations, tables 11, 12, 14-16.

*Excluding newborns

Iowa has one prepaid health care program in the development process: Quad City Health Plan (QCHP). Start up funds for this program will be from John Deere and Company, Moline, Illinois. QCHP will be an IPA structure with physicians forming an organization which contracts with the HMO. Area hospitals will also contract with the HMO which means there will not be building costs since the HMO will be utilizing existing facilities. The headquarters for QCHP will be in Bettendorf Iowa and a service area of Scott county in Iowa; Henry, Mercer and Rock Island counties in Illinois. Initially enrollment will be restricted to

employees of Deere and Company. After all enroll who want to enroll from Deere and Company enrollment will open to employers in the service area of the United Auto Workers Union. Those last allowed to enroll will be those of the general public through other employers in the QCHP service area and only if openings are available. Membership will be restricted to a growth rate of 10,000 per phase with a maximum of 100,000.

Central Iowa Health Association, Des Moines Iowa, is presently doing a feasibility study to determine the possibility of HMO development in the Des Moines area. It is anticipated a report of the results of the feasibility study will be made public sometime in June 1980.

There is also an application for funds to do a feasibility study for development of an HMO in Pottawattamie County Iowa and Douglas County Nebraska by Health Central of Lincoln Nebraska. At the present time there is no confirmation from HEW regarding approval of funding for this project.

GOAL 2: ALTERNATIVE DELIVERY SYSTEMS BE AVAILABLE IN IOWA.

Objective 1: By 1985, at least three HMOs be serving consumers in Iowa, if they are found to be financially feasible.

LRRA 1: By 1983, the Department will monitor the feasibility study for an HMO in Des Moines and, if feasible, will assist in developing plans for the HMO-IPA.

LRRA 1a: The Department will monitor the feasibility study for an HMO in Pottawattamie County.

Objective 2: If by 1985, independently licensed physician extenders are legally practicing, they will be directly reimbursed by third-party payors in Iowa.

LRRA 2: By 1983, the Department will assist the Iowa Board of Nursing in the implementation of rules relating to the practice of nurse specialties which will encourage third-party payment for those nursing specialties.

IOWA'S PRIORITY HEALTH PROBLEMS AFFECTED BY PRIMARY CARE SERVICES

- Accidents -

For the health consumer who has had an accident the entry point into the health system, primary care, might typically be through a physician's office or clinic, hospital emergency outpatient setting, or an on-the-job first aid station. The type and severity of the condition caused by the accident would vary greatly as would the necessary treatment modality. As has been cited before, Iowa has a large elderly population. This in conjunction with the fact that their need for medical availability is high when compared to other age categories, places particular demands on the health delivery system in the area of accident treatment.

During the 1976-78 period the Vital Statistics for Iowa document reported the fourth leading cause of death was accidents. Using the 1978 occurrence data (latest data) found in Appendix II, certain facts concerning the 65+ age category appear significant. Of the total deaths caused by accidents (1333), 384 or 28.8 per cent were in the category of 65+. Within this 65+ category, the

highest incidence of accidents which were fatal proves to be falls. Falls in both the home and public settings accounted for 189 or 49.2 percent of all deaths in the 65+ category. Relating this to the total death-related accidents, this 189 - 65+ death rate resulting from falls represents 14.2 percent of the total death rate in Iowa for 1978.

Since by definition accidents can be prevented, consumer education and utilization of that information could have a significant impact on the accident and accident-death rate in Iowa. Relating this to the elderly and particularly falls, consumer tips might prove beneficial. Such programs might include ways of fall-proofing the home to reduce this area of accidents. Of the 189 total, 39.7 percent of 75 fall-accident deaths occurred in the home.

Prevention might be seen as vital to the reduction of accidents and deaths due to accidents. Key to prevention is education and public awareness. (See the Prevention Chapter for further discussion.)

- Cancer -

The primary care system does not as a rule deal with this health care area other than in diagnosis and referral. (For further discussion, see chapters five and six).

- Dental -

Dental Disease almost universally affects the population of the United States. The problem seems to be primarily with people failing to recognize the seriousness of the problem. "There are major differences between the approach to most medical disesase and to dental diseases... Dental disease are seldom selfhealing. Most dental diseases are inreversible and become more severe without treatment." (6)

Many individuals seem to place a lower priority to dental health (See the following table) - than to other types of physical health.

Table 10

ANNUAL DENTAL VISITS PER CAPITA

SOCIODEMOGRAPHIC VARIABLE	DENTAL VISITS/PERSON/YEAR
Age[1]	
All persons	1.6
Under 17	1.6
17-24 years	1.5
25-44 years	1.7
45-64 years	1.7
65 and over	1.2
Family Income[2]	
All incomes	1.6
Under $5,000	1.1
$5,000-$9,999	1.3
$10,000 and over	2.0
Sex[1]	
Female	1.7
Male	1.4
Race[3]	
White	1.6
Non-white	0.7
Education of Head of Family[3]	
Less than 5 years	0.6
5-8 years	0.9
9-12 years	1.5
13 years or more	2.2
Place of Residence[3]	
Standard Metropolitan Statistical Area (SMSA)	1.6
Non-SMSA, Non-farm	1.2
Non-SMSA, Farm	1.1

SOURCES: (Compiled by Iowa HSA)

1) U.S. Dept. HEW, Public Health Service, Current Estimates from the Health Interview Survey: United States - 1978, November 1979.

2) Public Health Reports Vol. 89, No. 6 November-December 1974, p. 518.

3) U.S. Dept. HEW, Public Health Service, Dental Visits: Volume and Interval Since Last Visit: United States - 1969, July 1972.

Several inconsistencies are apparent in this table. If we accept the concept dental disease effects people almost universally then there should be a minimal difference between people as to their need for dental health care. A measure of dental demand or utilization is the number of patient visits to the practitioner.

In this table we notice that there are several differences which are occurring and yet little rationale for the difference. In the groups of race, education, and place of residence there is a great deal of variation of number of visits for the members of each of the sub-classes for these three groups. Since preventive and dental care services are not allocated according to race, education, or location (in a rural state such as Iowa accessibility to services may be a factor depending on location of practice and environmental conditions) there must be some other reasons for the differences.

Table 11 shows in the years 1971-74 of the sample surveyed only 44.3 per cent of the people visited a dentist during the year prior to the interview. During 1974-76 the average person made 1.6 visits per year and yet during that same time period 51.5 per cent of the population hadn't seen a dentist for one year or longer. (7)

Table 11

Persons 25–74 years of age who visited a dentist during the year prior to interview, according to reason for visit, age, and family income: United States, 1971–74

(Data are based on interviews of a sample of the civilian noninstitutionalized population)

Age and family income	Percent of population 25–74 years with dental visit	Reason for visit								
		All reasons	Regular checkup or cleaning	Toothache	Teeth filled	Trouble with gums	Tooth pulled or other surgery	Repair of dental plate	New dental plate made	Other
		Percent distribution								
Total[1]	44.3	100.0	49.4	3.2	17.4	2.3	10.4	5.6	3.8	7.9
Age										
25–34 years	47.4	100.0	50.0	3.4	21.7	1.5	11.4	1.7	1.9	8.4
35–44 years	49.9	100.0	53.9	3.6	15.0	2.2	11.2	3.2	3.2	7.6
45–54 years	47 9	100.0	49.1	3.1	17.7	2.7	8.1	7.1	4.6	7.3
55–64 years	37.6	100.0	47.1	1.1	13.3	2.7	9.3	10.1	7.4	9.3
65–74 years	31.6	100.0	41.5	4.7	15.5	2.5	12.0	12.7	4.7	6.0
Family income										
Less than $4,000	24.6	100.0	24.0	4.5	14.2	7.7	25.6	8.1	8.9	6.9
$4,000–$6,999	32.5	100.0	30.2	4.6	20.6	2.2	15.1	13.2	6.5	7.7
$7,000–$9,999	41.2	100.0	49.0	3.9	16.5	1.5	11.2	5.8	4.6	7.5
$10,000–$14,999	45.6	100.0	50.9	3.5	18.6	2.4	10.1	4.6	3.3	6.6
$15,000 or more	61.5	100.0	61.3	1.5	15.6	1.5	5.0	3.7	2.4	8.9

[1] Includes unknown family income.

SOURCE: Division of Health Examination Statistics, National Center for Health Statistics: Data from the Health and Nutrition Examination Survey.

As pointed out by the Iowa Health Systems Plan 1980-85 p. 161 "dentist visits are a measure of demand not need," "about 9 per cent of the population have never made a dental visit." (8)

Increased utilization of services available as well as increased efforts in preventive strategies might lower incidence rates of dental diseases. (For discussion of preventive strategies see Preventive Services Chapter Three).

There have not been any recent studies regarding dental diseases in the State of Iowa but Iowa should closely compare with national statistics. "(Nationally) half of the school-age population has some form of malocclusion (9) and gingival (10) disease. By middle age, 7 million adults have lost all of their teeth and another 10 million have lost half of theirs. (11) Each year more than 6,000 babies are born with cleft lip or palate, and oral cancer strikes some 24,000 Americans per year and kill about 9,000 annually. (12)" (13)

The basic diiference between children and adults is children primarily have more tooth decay with adults more periodontal disease. The Iowa Health Systems Plan 1980-1985 stated the National Health Interview Survey reported the following:

> "...the most common childhood diseases, dental decay (caries), affects children early in life. Some children will experience tooth decay as early as age two or three. On entry to school at the age of five, the average child has three decayed teeth. The incidence of new cavities in children 6-11 years of age is one per year, and one and one-half per year in children 12-15. Gingivitis, the earliest stage of periodontal disease, occurs in a major portion of children by age 13. Sixty-eight percent of children age 12-17 have some form of periodontal disease; approximately 78% of all adults have some form of periodontal disease."

The end result of neglect of adequate dental care and treatment of disease (dental caries, periodontal) is loss of teeth (edention). Twenty-five million people in the United States are completely without natural teeth: 2.6 out of ten people (26%) past age 25; one out of every three (32%) past age 45; four out of ten people (41%) past age 55. (14) Table gives some indication the risk of tooth loss individuals encounter at a fairly early age (aged 17 years).

Table 12

TOOTH LOSS DUE TO DENTAL CARIES FOR

PERSONS AGED 17 YEARS, 1971-74

Number of Permanent Teeth Lost Due to Caries	Percent of Persons Examined
No Missing Teeth	61.6
With Missing Teeth	38.4
1 Tooth	11.4
2 Teeth	6.3
3 Teeth	6.9
4 or More Teeth	13.8

SOURCE: NATIONAL CENTER FOR HEALTH STATISTICS: Health and Nutrition Examination Survey

As earlier stated there are strategies with proven success to combat the incidence of dental disease (caries, periodontal). Preventive (see Preventive Chapter) methods include but are not restricted to fluoridation of public water systems, topical fluoridation, careful selection of nutrition, etc. and

primary care considerations as regular dental check-ups. Primary care is obviously tied very closely to the availability and accessibility of the primary care dental practitioner.

GOAL 3: IMPROVED ORAL HEALTH AMONG ALL RESIDENTS OF IOWA.

(Objectives and action steps will be included after May 5 meeting with a committee of the Dental Association.)

- Heart Disease -

The primary care system does not as a rule deal with this health care area other than in diagnosis and referral. (For further discussion, see chapter five and six.)

- Communicable Diseases -

Because of the nature of the disorders, the main emphasis for control of communicable diseases is preventive. However, once the disease is contracted, measures must be taken to restore the health of the patient. The majority of communicable diseases can be categorized as acute conditions. This means that they exemplify a sudden onset, severe symptoms, but all for only a relatively short duration. In addition, the period in which a person is contagious, i.e., can transmit the disease to another, is limited. Therefore, prompt and accurate diagnosis of the condition at hand is the primary step in the care of these illnesses. Without such, a patient may unknowingly expose others.

To realize the impact of these diseases on Iowans, it is necessary to determine how wide spread they are. Below is a chart depicting the number of cases of communicable diseases for the years 1974-1977.

Disease	1977	1976	1975	1974
Brucella	25	47	29	10
Chicken Pox	8261	11726	9507	8748
Flu-like Influenza	53857	55152	50790	107977
GIV*	24640	31957	25457	20120
Hepatitis A	118	121	202	269
Hepatitis B	121	92	93	91
Measles	4335	109	717	134
Meningitis	10	10	8	9
Mumps	1370	1634	1513	1985
Pertussis	4	5	24	15
Pneumonia	1354	1079	1122	1015
Rubella	179	91	31	15
Streptococcal Infections	12300	14756	10357	10562
Tuberculosis	96	115	125	124
Syphilis	263	359	331	372
Gonorrhea	6016	6515	7261	6236
Total	112949	123768	107567	156682

*Gastro-intestinal Viral Infection

Cumulatively, these figures show a total of 112,949 reported cases of communicable diseases. This is approximately equal to one case for every 25 persons in Iowa. The figure for 1977 is a 10 percent increase over the 1976 figure but shows a 28 percent decrease over the period high (1974).

Excluding venereal disease and streptococcal infections, the treatment for these conditions is symptomatic. That is to say the underlying disease state must be allowed to run its course. Attention may be given to the symptoms of the disease and an attempt may be made to decrease their effects. Caution must be taken to prevent a worsening of the disease state of predisposing the patient to other diseases. Venereal diseases and streptococcal infections have specific treatment modalities which should be followed. The 1978 State Health Plan addressed a need for medication availability to increase to all syphilis and gonorrhea patients, regardless of the patient's ability to pay.

- Complications of Pregnancy -

Primary care as related to maternity and childbirth is delivered primarily in the physician's office or clinic, the hospital emergency outpatient setting, or area health centers. The emphasis is on prevention of complications of both mother and child during childbirth as well as child rearing.

The Iowa State Department of Health offers the Iowa Maternal and Child Health Programs to increase the availability of each maternal and child health services in an effort to reduce any complications of childbirth and rearing. The program's service goals are to:

> "assure comprehensive health services, especially preventive, for women (ages 15-44) and children (under age 21) in the 16 state planning areas. Comprehensive health care includes not only physical examination and medical care, but also dental, nursing, social work, nutrition, and other health care as appropriate. Comprehensive health services implies case-finding and ongoing health supervision which would include health education, assessment, counseling, referral to the appropriate health, social, or other providers, and appropriate follow-up."

(For a listing of the maternal health centers, child health centers, and dental health centers, see Table 4, Appendix 2, in the supplemental appendices to this State Health Plan.

There also exists in Iowa the voluntary effort of the Statewide Perinatal Care Program. This program was established in cooperation with the Iowa State Department of Health, University of Iowa, local physicians and hospitals. It provides a model for perinatal care nationwide. (For further discussion see the Acute Care Chapter).

- Mental Disorders -

The statewide priority need for primary care services in relation to mental health is especially important because it encompasses what is defined as secondary prevention of mental illness.

Secondary prevention can be thought of as activities that lead to identification, case-finding and treatment of situational difficulties; these activities include intervention at the time of early symptomatic warning, and should lead to immediate and effective treatment and follow-up.

A mental health needs assessment for Southwest Iowa, conducted by the Crossroads Mental Health Center, predictably indicated that most people prefer to go to their family physicians for treatment of emotional disorders.

There have been many studies to assess the volume of mental health care delivered by family physicians. It is estimated 15 percent of general practice patients have mental disorders. A study conducted in Monroe County, New York in a general medical outpatient clinic found 22 percent of the patients over 15 years old who came for physical reasons were diagnosed to have emotional disorders. Of those so diagnosed the clinic physicians provided treatment for 94 percent of neurotics, 85 percent of personality disorders and 66 percent of those diagnosed psychotic. (15)

The implications of such findings are clear for those planning mental health services. General practitioners are more readily available, lower in cost, and do not hold the stigma associated with specialized mental health services. Thus, strengthening the effectiveness of primary care practitioners in detection and treatment of mental health disorders has potential for high yield in cost/benefit. The importance for education of the general practitioner in screening for and treatment of the mentally disordered is also clear. High quality demands continuous education in mental health for primary care givers.

Public Health Nurses are another source of secondary prevention of mental illness. They bring services to the home setting and as such, have contact with persons who need encouragement to accept treatment when needed.

The public schools have an increasing role in mental health services for children. Public Law 94-142 mandates school districts provide education for handicapped children including the emotionally disturbed. Both state and federal interpretations of the law require that pupils must intermingle with regular students to the fullest extent possible. It is a grave disservice to these children if there is not professional mental health consultation available to both students and teachers.

What is <u>national</u>, <u>state</u> and <u>local</u> policy regarding primary care/mental health?

The Federal Community Mental Health Centers Act, sought to provide incentives for communities to develop innovative programs to cover a complete range of mental health services, including specialized services for children and the elderly. New Federal Legislation is being introduced as a result of The President's Commission on Mental Health. This legislation is expected to emphasize the CMHC's role in seeing that a community is provided with all aspects of mental health care but not necessarily provided within the center. In other words, the CMHC might be the first contact, but the needed service might be by referral to another agency. The State Advisory Council for Mental Health in Iowa is supporting legislation to see that the federally recommended services are available and accessible to all Iowans. These services are:

- consultation and education
- outpatient care
- emergency mental health services
- substance abuse services
- aftercare
- services for the elderly
- services for children
- transitional living
- screening

The Community Mental Health Centers, as well as mental health institutions such as Iowa's Mental Health Institutes and the county care facilities, are becoming increasingly aware of their role in primary mental health care.

For further information see Mental Health/Substance Abuse Chapter.

- Substance Abuse -

To strive towards a limitation of substance abuse, two areas of health care relating to primary care must be taken into account:

1) prevention and detection, and

2) treatment of those currently abusing.

Prevention and detection involves not only the identification of abusers and users, but the education of all people within that state as to the implications and possible impact drug use and abuse may have on their lives as well as others in society. The identification of users and abusers is done in a variety of settings: schools, employment, hospitals, etc. Through identification and early treatment of the causes of the abuse or use, reduction in the present and future abuser population may be obtained. Prevention services include those programs aimed at educating the population as to the hazards of drug use and abuse. This can be expanded to include not only the general public but the professionals who are able to dispense drugs through licensure authority. Hopefully, the more aware the population is as a whole concerning drug abuse, the lower will be the incidence rate of that drug abuse. (See Prevention Chapter) For treatment of those currently abusing drugs, services need to be accessible 24 hours daily to both the abuser and the family and friends.

According to the Iowa Comprehensive State Plan for Substance Abuse 1979-80, the treatment and program priorities are for affecting those groups with the highest incidence levels of abuse. Iowa programs focus on polydrug abuse, particularly the combination of alcohol and other drugs.

As described in the 1979 Substance Abuse Plan, service delivery of all direct substance abuse treatment services is provided by private not-for-profit community programs. IDSA does not directly provide such services, but rather provides the federal and state funding, allocated via the grants and contracts mechanisms described in section VI, Grants Systems, to these programs for service provision. Drug and alcohol treatment services are provided via three types of community programs. These programs are (1) separate independent drug treatment or alcohol treatment programs, (2) independent combined drug and alcohol treatment programs which are administratively but may or may not be clinically merged, (3) drug and/or alcohol treatment components housed and administrated by a community mental health center.

Continued emphasis is placed on services to youth involved in the juvenile justice system, through the criminal justice coordination project. This emphasis on treatment for youth in the juvenile justice system can be related to the high incidence of youth substance abuse arrests. (See Table 13)

It needs to be noted that treatment for individuals who are involved in substance abuse needs to be in proper settings. The criminal justice system should not be seen as a viable treatment arena for substance abusers when alternative settings are available and appropriate depending on the need for security and legality with particular clients.

Substance-related deaths numbered 330 for 1977 according to figures released by the Iowa Department of Health, marking an 8.2 percent increase over the 1976 (305 drug related deaths) figures. Of the 330 deaths, 223 were alcohol and drug toxic episodes, 30 were suicides, 39 were accidents and 38 were undetermined.

Acute alcohol episodes requiring treatment appear to have doubled between 1976 and 1977; and treatment for marijuana increased by 50 percent, while narcotic episodes decreased by more than 37 percent. Polydrug episodes remained stable.

Admission for drug or alcohol dependency to Mental Health Institutes continue to increase with the majority being for alcohol dependency. The 1978 data acquired from Iowa's Mental Health Institutes report alcohol as the number one substance of choice with marijuana and amphetamines ranking second and third.

The 1978 State Health Plan set as a goal the conception of statewide comprehensive substance abuse services. Within the framework of this goal, an objective was designed to establish uniform and consistent guidelines for the development and operation of substance abuse programs. According to the most recent evaluation, the Iowa Department of Substance Abuse developed combined license standards for alcohol and drug abuse programs which were promulgated February 1, 1979. The licensure process was immediately started and plans for completion are June 30, 1980. Also, standards are being developed by the Iowa State Health Planning and Development Agency and the three Health Systems Agencies for project review of substance abuse programs.

Another objective was designed to make available counseling services to families of substance abusers in crisis situations. Evaluation shows the majority of substance abuse programs do offer family counseling services and their objective is almost accomplished.

For further information see Mental Health/Substance Abuse Chapter.

SOURCE OF INFORMATION - PRIMARY CARE

The analysis of Iowa primary care services and status was primarily developed from the planning efforts of five agencies: Health Planning Council of the Midlands, Health Systems Plan Third Edition; Illowa Health System's Agency, Health Systems Plan 1980-1984; Iowa Health System's Agency, Iowa Health Systems Plan 1980-1985; Iowa Mental Health Authority, State of Iowa Plan for Mental Health Services 1979-80 Progress Report; Iowa Department of Substance Abuse, Iowa Comprehensive State Plan for Substance Abuse 1979-1980.

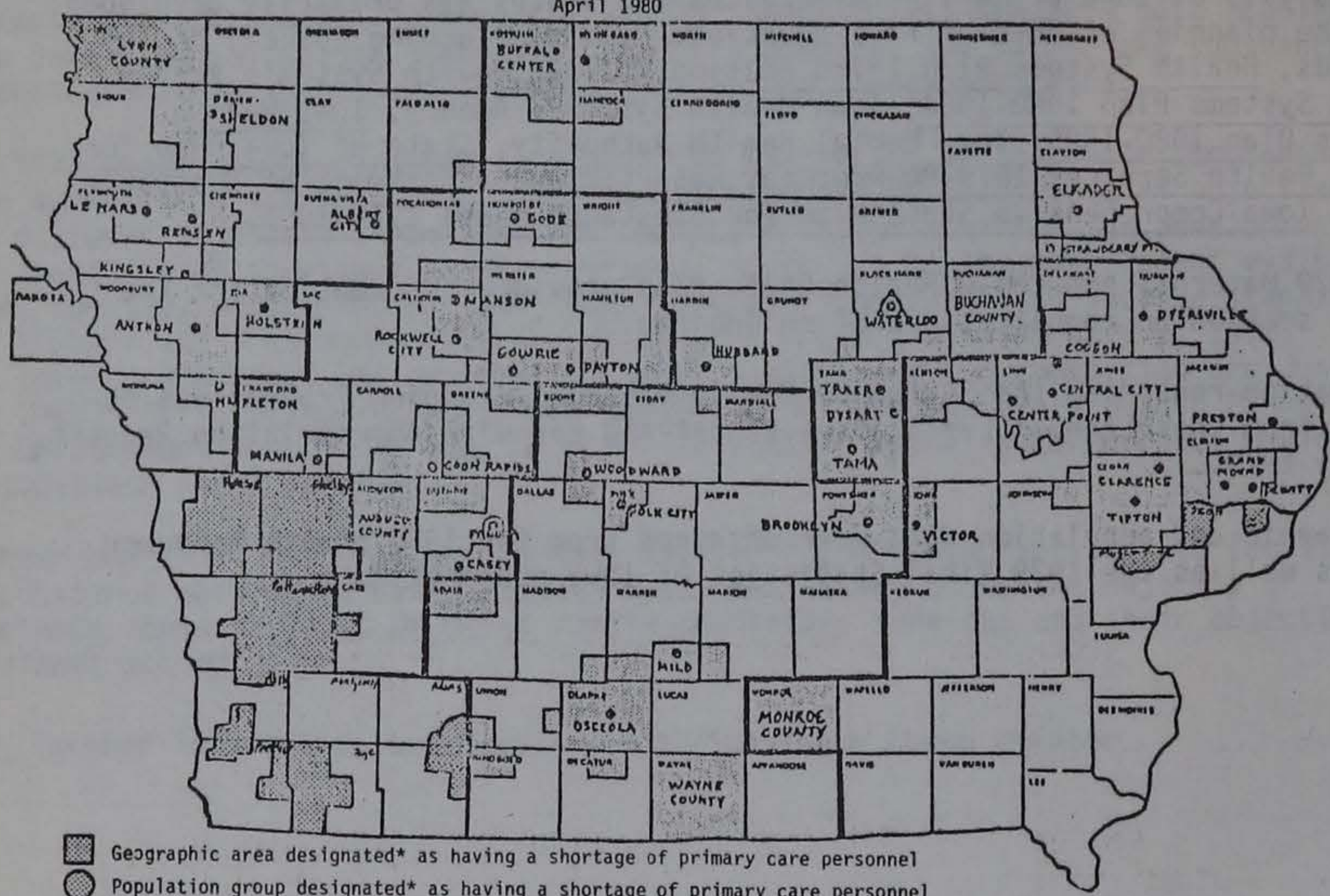
The 1979 Maternal and Child Health State Plan provided information for the status section on complications of childbirth.

Information regarding the Statewide Family Practice Training Program was obtained from their Annual Legislative Report and Biennial Appropriation Request, January 1979.

Demographic and population data were obtained from the 1977 Health Manpower Plan as well as the 1978 Vital Statistics of Iowa publication.

PRIMARY MEDICAL CARE PERSONNEL SHORTAGE AREAS

April 1980



Geographic area designated* as having a shortage of primary care personnel

Population group designated* as having a shortage of primary care personnel

Facility designated* as having a shortage of primary care personnel

* Designated under Public Health Service Act, Section 332, Public Law 94-484

(SOURCE: HPCM, Illowa HSA, Iowa HSA)

FIGURE 3

ADULT AND JUVENILE SUBSTANCE ABUSE ARRESTS FOR 1976-77

(Source: Iowa Department of Substance Abuse-Iowa Comprehensive State Plan for Substance Abuse 1979 - 1980)

DISTRICT	Total Arrests		Controlled Substances				OMVUI**				Public Intoxication				Total Substance Abuse Related Arrests			
	1976	1977	1976		1977		1976		1977		1976		1977		1976		1977	
	#	#	#	%*	#	%*	#	%*	#	%*	#	%*	#	%*	#	%*	#	%*
Juvenile																		
Northeast	3,304	3,266	191	6%	208	6.3%	28	1%	31	1%	89	3%	124	3.8%	308	9%	363	11.1
Northwest	3,923	3,511	283	7%	201	5.1%	44	1%	43	1%	126	3%	117	3.3%	453	12%	361	10.3
Central	6,802	6,764	362	5%	449	6.6%	55	1%	93	1.4%	455	7%	400	5.9%	872	13%	942	13.9
Southeast	10,247	10,500	474	5%	509	4.8%	60	.5%	72	.7%	377	4%	296	2.8%	911	9%	877	8.6
Southwest	2,328	2,545	74	3%	70	2.8%	49	2%	62	2.4%	73	3%	113	4.4%	198	9%	245	9.6
State-wide Juvenile	26,604	26,586	1,384	5%	1,437	5.4%	236	1%	301	1.1%	1,122	4%	1,050	4%	2,742	10.3%	2,788	10.5
Adult & Juvenile Combined																		
Northeast	9,384	10,415	603	6%	516	5%	954	40%	1,249	12%	1,693	18%	1,763	17%	3,250	35%	3,528	34%
Northwest	10,866	11,599	746	7%	470	4%	1,293	12%	1,412	12.2%	1,827	17%	2,004	18.4%	3,866	36%	3,886	34%
Central	20,398	23,778	1,029	5%	899	3.8%	1,792	9%	3,473	14.6%	5,132	25%	5,785	24.3%	7,953	39%	10,157	42.7
Southeast	23,935	25,633	1,360	6%	1,003	4%	3,067	13%	3,859	15%	4,286	18%	3,947	15.3%	8,713	36%	8,809	34.3
Southwest	6,435	8,283	291	4.5%	224	3%	861	13%	1,172	16%	1,088	17%	1,088	17%	2,240	35%	2,484	34%
State-wide Adult & Juvenile	71,018	78,708	4,029	6%	3,112	4%	7,967	11%	11,165	14%	14,026	20%	14,587	18.5%	26,022	37%	28,864	37%

*% = Percent of total juvenile or adult arrests by district

**OMVUI - Operating a Motor Vehicle Under the Influence of Alcohol or Other Drugs

206 A

FOOTNOTES

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13. The Pennsylvania State Health Plan 1979-1984, p. x1-1.

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Chapter Five

Acute Care

- Description of Acute Care Delivery in Iowa -

General acute care services are provided in hospitals, clinics and physicians' offices and inpatient acute care services are generally provided in a short-term (30 days or less) hospital. These short-term hospitals also provide other kinds of medical care. For instance, primary care is administered in the emergency room and long-term care is provided in the skilled nursing beds. What, then, is acute care?

Acute care is the treatment of acute disease. The disease is "characterized by a single episode of a fairly short duration" from which the affected consumer returns to a "normal or previous state and level of activity. While acute diseases are frequently distinguished from chronic diseases, there is no standard definition or distinction." (1)

Acute diseases are treated by physicians in their office or clinics or in hospitals as an outpatient service. Severe episodes are treated in hospitals on an inpatient basis.

In this chapter, unless otherwise designated, acute care services will refer to inpatient acute care and the acute care system will refer to the inpatient acute care facilities in Iowa.

The acute care system involves hospitals, professional personnel, financial intermediaries, third-party payors, and, of course, the consumer.

Because acute care costs are such a significant part of the health care dollar, and because so much public money finances the system, public scrutiny in this area has been substantial.

In addition, the largest portion of the acute care system is not funded directly by fees collected from consumers. Ninety percent of the costs are paid by insurers or by government, and for that reason, market forces cannot be expected to regulate the industry. Consumers directly pay only about ten percent of the hospital bills and indirectly pay for the other ninety percent. In some cases consumers may not be aware that their selection of a hospital can be limited by their selection of a physician. In some cases physicians are limited in their selection of available hospitals by geography. Consumers are usually not equipped to question the quality or cost of services provided them. Therefore, in order to seek levels of quality and cost that best serve the citizens of Iowa, the legislature has adopted laws and the Statewide Health Coordinating Council (SHCC) has advised the legislature and has adopted rules and standards for implementing these laws, standards and policies aimed at bolstering the market forces in the health care field. The market forces affect quality, availability and cost of care. What follows is a brief description of those policies relating to acute care facilities and services.

- Statewide Policies Affecting Acute Care Delivery -

Facility Licensing

Hospital corporations are licensed and their facilities must meet physical plant standards for safety. (See Chapter 135B, Code of Iowa (1979) and IAC 470-Chapter 51.)

Usable beds, beds in specific service areas, and services offered, are licensed at their current level and subject to a Certificate-of-Need approval before changes may be undertaken. (See Chapter 135.61-83, Code of Iowa (1979), and Social Security Act, Section 1122.)

Most Hospitals in Iowa are accredited by the Joint Commission on Accreditation of Hospitals (J.C.A.H.) and similar accrediting bodies.

Capital Equipment and Construction

Any change in the number of beds available or capital equipment purchased (over $100,000 cost for Medicare reimbursement and $150,000 for Certificate-of-Need review) must be approved by the Health Facilities Council in accordance with standards and criteria for a Certificate-of-Need. (See Chapter 135.61-83, Code of Iowa (1979) and Social Security Act, Section 1122.)

The capacity of beds or equipment within a service area in excess of need levels determined by the Iowa SHCC must be considered before new beds are built or new equipment is purchased. (See Chapter 135.61-83, Code of Iowa (1979) and specific standards.)

System-wide long-range facilities planning is encouraged in order to reduce duplicative and costly underutilized capacity. (Recommended in Public Law 93-641 and cited by the Health System Agencies in Iowa.)

Utilization of Hospitals

Hospital utilization of existing capacity should be monitored annually by the Department of Health. Trends and patterns will be studied to project future needs. (See Chapter 135A, 135.75 and 135.78, Code of Iowa (1979) and Public Law 93-641.)

In addition to considering mortality and morbidity levels in an area, hospital usage should be analyzed as to whether the population's acute care needs are being met, and as to whether hospital use rates are unnecessarily high in some areas and too low in others. (See mandates in Public Law 93-641 also cited by Health Systems Agencies in Iowa.)

Peer review committees should continue monitoring consumer lengths of stay and begin to monitor consumer records to identify the appropriateness of hospitalizations. (See Title XI Part B of the Social Security Act.)

Acute care use rates in Iowa communities should be expected to vary in accordance with the increased needs of some age groups and geographic factors. Substantial variation among county use rates that are not justified by differences in need should be reduced. (See Acute Care Standards for Certificate-of-Need Law, Chapter 135.61-83, Code of Iowa (1979).)

Alternatives to Acute Care

Acute care hospitals should be encouraged to provide alternative treatment modes so that physicians may be encouraged to treat consumers in the least costly mode of treatment, consistent with medical safety (e.g., day-surgery, pre-admission testing, ambulatory care). Physicians should seek for their consumers the least costly means of care. (See Public Law 93-641, Title XI, Part B of the Social Security Act, and cited by Health Systems Agencies of Iowa.)

Prepaid medical delivery plans, such as Health Maintenance Organizations (HMOs), Independent Practice Associations (IPAs) and other alternatives should be encouraged as a means of reducing acute care usage and costs. (See Public Law 93-641 and cited by Health System Agencies in Iowa.)

Making the Acute Care System More Efficient

While allowing for accessibility to acute care services for all Iowans, acute care beds should be eliminated and staff reduced in areas where acute care inpatient needs no longer justify the capacity. Bed levels and staff should be increased only in those areas where future needs cannot be met by the available capacity. (See Acute Care Standard for Certificate-of-Need, Chapter 135.61-83, Code of Iowa (1979), and cited by Health System Agencies in Iowa.)

The number of non-federal acute care beds needed by Iowans is projected to be no greater than 4.4 beds per 1000 people in 1985. A greater per capita rate will exist in the rural areas to acknowledge greater accessibility needs. (See Acute Care Standard, cited above.) Some counties will have need for more than 4.4 beds per 1000 persons and some counties will have need for fewer.

For consumers requiring less specialized and intensive service, primary level rural hospitals are less costly than metropolitan secondary and tertiary level facilities and consumers living in those rural areas should be encouraged to seek treatment close to home whenever possible. Additional consideration should be given in all programs and regulations for the need to support the accessibility to small rural hospitals. (See Acute Care Standard, cited above.)

In metropolitan areas with more than one acute care hospital and in rural areas where several facilities are reasonably close geographically, sharing should be encouraged in planning, purchasing, scheduling, staffing and shared services. (See Public Law 93-641, Chapter 135.61-83, Code of Iowa (1979), and cited by Health System Agencies in Iowa.)

Making the System Less Costly

Inflationary increases in hospital charges should be reduced as much as possible. Thus, the hospital's share of Iowa's consumer dollar would be expected to remain constant, and not ever-increasing. (Cited by the Health System Agencies in Iowa and consistent with the President's guidelines for reducing inflation and the goal of the Iowa Voluntary Cost Containment Committee.)

To monitor those cost increases and to determine for the Legislature whether rate regulation will be needed to bring about the cost reductions, a uniform cost reporting mechanism should be developed by the Department of Health. Hospitals will then submit cost and utilization data to the Department for a report to the Legislature. (See Chapter 135.74, Code of Iowa (1979).)

Making the System More Responsive to Consumer Needs

All facilities shall serve aid-recipient and indigent consumers irrespective of their ability to pay. (See Social Security Act and Hill-Burton Act.)

In addition to locally-selected and publically-elected hospital trustees and county elected officials, the interests of consumer accessibility and representation will be the concern of federal, state and local health planning agencies. (See P.L. 93-641.)

All consumers should be entitled to an involvement in the decisions relative to their treatment. (See "principle 7", 1978 Iowa State Health Plan.)

In order to implement most of these policies, specific legislation is in place and programs have been established. What follows is an analysis of the success of those programs and a discussion of what remains to be done.

- Programs Aimed At Implementing Acute Care Policies -

Facility Licensing and Certification

Under Chapter 51, Administrative Code, hospital licensing rules prescribe the governance, record-keeping, minimum construction standards, minimum equipment and maintenance standards. These standards are general and apply to all acute care facilities. The Certificate-of-Need Law adds an additional dimension to the state's licensing authority by holding facilities to a current level of beds, services and capital equipment until those facilities petition for and receive approval to expand the beds, services and equipment (when the costs exceed predetermined amounts). The Certificate-of-Need program, thus, authorizes facilities at their current levels of beds, services and equipment. The Certificate-of-Need Law specifies the responsibilities of hospital administrators regarding capital expenditures, services and bed capacity in order to be licensed. However, there appears to be misunderstandings of the Certificate-of-Need Law. There have been instances where hospitals have varied their bed capacity by remodeling without following the review process. Additionally, some misunderstanding exists as to the specific definition of "usable beds" as it applies to current capacity.

"Usable beds" are defined in the Iowa Code as "the number of beds available for patient care excluding that portion of the designed capacity which cannot be used as an inpatient bed area adding staff and/or moveable equipment." (2)

In some instances facilities have potentially usable bed capacity greater than their scheduled policies or their certification permit them to use in order to maintain the best mix of single and multiple-occupancy rooms. Because a multiple-occupancy may be converted to a single-occupancy room as needed, the mix may be maintained. The definition in the Code presumes that all rooms will be used for multiple-occupancy. A clarification of the definition will help correct this confusion.

As hospital administrators become more accustomed to the regulations, inadvertent failure to properly file for a certificate should prove to be less of a problem. Within the process of licensing and certification some costly and duplicative regulations may exist. Wherever possible these should be identified and eliminated.

Capital Equipment and Construction

Capital equipment for hospitals and bed construction is enormously expensive and even more so if it will be used below its intended capacity. To build a metropolitan hospital bed in Iowa today costs about $75,000 (in 1978), excluding the cost of the borrowed capital. These overhead costs are distributed through the charges. For ninety percent of the consumers, the charges are covered by insurance companies or public reimbursement. Thus, ninety percent of the cost associated with under-used capacity and equipment is borne by the general public, ten percent is borne by the self-paying consumers.

The problem seems to be one of individual facility planning versus system-wide planning. To a hospital administrator, the physician is the primary customer. The physician decides what services will be performed in the facility, and for the most part a third-party will be paying the bill.

Historically, hospital administrators have had to respond to physician requests for new capital equipment with little system-wide planning to assure that the same equipment was not already being underutilized in the system. Some equipment would be necessary to provide for specialty services and some equipment would provide the state-of-the-art for services already offered. The cost of the equipment would be added to the consumer charges.

Beginning in 1974, capital equipment purchases that were greater then $100,000 and any bed capacity change could not receive cost reimbursement through the Medicare program without having on file an approved Section 1122 Certificate. Section 1122 of the Social Security Act is a means by which the federal government contracts with the states to examine and control the costs of inappropriate capital purchases by health facilities.

In 1977, the State of Iowa added a Certificate of Need program to provide additional guidelines and sanctions for facility capital expansion. The decisions will thus be scrutinized by the facility administrators and planners, their trustees, the planners and board of the local HSA and ultimately by the staff and members of the Health Facilities Council. Still there are underutilized resources in the system and demands for more and better.

Perhaps the underuse of resources and the separation of payor from the recipient of the services have created a different set of priorities. These different set of priorities can partially explain why the cost of hospital services over the past ten years has increased by about twice as much as have physician fees and about six times as much as prescription drugs. Of course, part of the increase in costs is the result of technological advances in medicine that were not available ten years ago.

For the hospital administrator the planning perspective is built on the facility's goals to expand and improve its services. A facility remodels its capacity to serve a specific population and in doing so may seek to change physician referral patterns and the hospitals potential market.

State-wide planning for acute care involves continually evaluating the population aggregate needs and determining what equipment, technology and bed capacity will satisfy that need on an on-going basis. The cornerstones of state-wide or system-wide planning are 1) an analysis of system needs and 2) an inventory of what is available to satisfy those needs. A system-wide planning approach is the principle behind the Certificate-of-Need Law and local area health planning.

GOAL 1: MINIMIZE THE ADDITION OF DUPLICATIVE AND UNDER-UTILIZED ACUTE CARE CAPACITY AND EQUIPMENT.

Objective 1: By 1985, future system-wide need levels will be projected for hospital capacity and equipment.

In order to implement this objective several action steps were considered in an effort to overcome barriers which were identified as: inadequate base-line data on service-specific needs, and unverified inventories of the current acute care system.

LRRA 1: By 1983, the Department of Health will project population needs for specific acute care services as a part of the Department's responsibilities to conduct an appropriateness review of the health care system.

By 1985, the Department will draft Certificate-of-Need Standards for specific acute care bed units and services that will be consistent with the outcomes recommended by the research undertaken during the appropriateness reviews.

Objective 2: By 1983, imprecise terms used in facility regulations, such as "usable beds" will be defined in greater detail.

The specific barriers to the achievement of this objective are the ambiguities built into the statutory definitions and the understanding of those definitions by the provider and planner communities. In order to overcome those barriers a rule-making process will begin. During that process an open exchange between providers and planners will determine a concensus definition of terms.

LRRA 2: By 1983, the Department will develop and seek promulgation of expanded definitions that more precisely describe the components being regulated under the Certificate-of-Need law.

Objective 3: By 1985, all hospital administrators will have an acknowledged understanding of their facility's approved bed capacity, services and capital equipment.

This objective aims at determining an unambigious inventory of the acute care system so that changes could be channeled through the Certificate-of-Need process. It also aims at informing hospital administrators of the permanent levels against which future changes will necessitate a Certificate. By so doing it is intended to reduce the occurrance of inadvertent violation of the Certificate-of-Need law.

LRRA 3: By 1985, the Department will complete an on-site inventory of all hospitals, and will notify each hospital administrator of their facility's approved bed capacity, services and capital equipment.

Objective 4: By 1983, all projects that require a Certificate-of-Need be undertaken only with such a certificate.

It is assumed that hospital bed capacity changes and capital equipment purchases (in excess of $150,000), and changes in services offered that occur without having been reviewed by the Certificate-of-Need process are either inadvertent or intentional. If inadvertent, then the problem may be minimized by more thoroughly informing affected parties as to their precise responsibilities. If intentional, then the problem may be minimized by increasing the risks and penalties for violation.

Currently, the sanctions for failure to comply are either injunctive relief or denial of licensure. The first sanction is a time consuming process which could permit the service or construction to be completed before the legal issues are ever decided. Once the project is a fait accompli the cost-saving advantages may no longer be significant. The sanction of delicensure or denial of licensure is a severe penalty, allowing no intermediate-level penalty. In order to overcome these barriers, the following actions are provided.

SRRA 4: By 1982, the Department will publish a guide for hospital administrators, informing them of their specific obligations under the Certificate-of-Need law.

LRRA 4: By 1983, the Department will draft legislation establishing a range of sanctions for hospitals that fail to obtain a Certificate-of-Need prior to changing bed capacity, facility square footage, services offered, or purchasing capital equipment above the $150,000 limit specified in the law.

Utilization of Hospitals

Acute care general hospitals in Iowa have experienced patterns of use similar to hospitals systems in other states. In the 1950's the hospital system grew in number and quality with the infusion of federal dollars from the Hill-Burton Program. In the 1970's, the emphasis was on tightening up the system and economizing. During those years there was a substantial increase in the use of hospitals by previously undertreated populations. With the passage of the Medicare Amendments to the Social Security Act, previously underserved populations began receiving Medical care. In Iowa these changes can be seen from the statistics in Table 1.

See Table 1 on the next page.

TABLE 1

GENERAL HOSPITAL UTILIZATION IN IOWA

	No. of Hospitals	No. of Designed Beds	No. of Usable Beds	Admissions	Patient-Days	Occupancy Rate % Design	Occupancy Rate % Usable	Average Length of Stay	State Population Estimate	Beds/ 1,000 Design	Beds/ 1,000 Usable	Admissions/ 1,000	Patient Days/1,0
1950	141	10,607		301,062	2,684,459	69.3		8.92	2,621,073	4.05		114.86	1,024.2
1955	156	11,072		347,901	2,481,671	61.4		7.13	2,689,305	4.12		129.36	922.8
1960	156	12,400		402,623	2,831,217	62.6		7.03	2,757,537	4.50		146.01	1,026.7
1965	146	13,881		462,938	3,368,379	66.5		7.28	2,791,289	4.97		165.85	1,206.7
1970	141	14,520		476,929	3,699,260	69.8		7.76	2,825,041	5.14		168.82	1,309.5
1971	141	14,682		483,176	3,635,000	67.8		7.52	2,833,473	5.18		170.52	1,282.9
1972	141	16,665		487,104	3,569,067	58.7		7.33	2,841,907	5.86		171.40	1,255.9
1973	141	16,752		492,281	3,529,392	57.7		7.17	2,850,336	5.88		172.71	1,238.2
1974	140	16,893		499,402	3,462,359	56.2		6.93	2,858,768	5.91		174.69	1,211.1
1975	138	16,961		520,227	3,578,064	57.8		6.88	2,867,200	5.92		181.44	1,247.9
1976	135	16,062		556,317	3,821,740	65.2		6.87	2,876,953	5.58		193.37	1,328.4
1977	133	16,041	15,652	541,474	3,675,974	62.8	64.3	6.79	2,886,726	5.56	5.42	187.57	1,273.4
1978	132	16,373	15,941	551,289	3,671,166	61.4	63.1	6.66	2,896,444	5.65	5.50	190.33	1,267.5

SOURCE: Annual Reports for Hospitals, Iowa State Department of Health.

From 1950, the early years of the Hill-Burton Program, until the mid-1970's, the number of hospital beds in Iowa increased and so did the ratio of beds to the population. Hospital occupancy rates continued to increase, despite the growing availability of beds, until the early 1970's. From the 1950's until the present, the rate of hospital admissions has continued to climb, while the length of an average hospital stay has become shorter. While all of this was happening, the population was gradually growing and was also, on the average, growing older.

Hospital inpatient usage has not been equal among all age groups. In a 1977 study, the hospital usage rates for Iowans were found comparable to the U.S. rates in 1977 for hospital usage. In Table 2 it can be seen that Iowa rates for persons over age 44 were lower than U.S. rates for those age groups, but Iowa rates were higher than U.S. rates for persons under age 45.

TABLE 2

Acute Care Hospital Inpatient Usage, 1977

(Patient-Days Per 1,000 Persons Per Year)

AGES	U.S.	IOWA*	% IOWA EXCEEDS U.S. RATES
0-14	308	353	15
15-44	849	943	11
45-64	1688	1629	-3
65+	4156	3828	-8
Average	1237	1273	5

*Specific ages based upon an annualized four-week sample survey. Average is based upon annual.

Source: Iowa State Department of Health and DHEW, Utilization of Short Stay Hospitals, Series 13, No. 41.

Among Iowa's counties, there were wide differences in age-specific hospital usage rates. It can be seen in Table 3 that the pediatric-age hospital use rate, for example, varied from a low county with 48 patient-days per 1000 persons. Identifying this difference is the first step in seeking the reasons for such patterns. Studies are currently underway by the staff at the Iowa H.S.A. and in the Department of Health to provide a better understanding of the reasons for use-rate variation among geographic areas in Iowa.

TABLE 3

Hospital Usage Rates in Iowa Counties, 1977
(Hospital Patient Days per 1,000 Persons per Year for Residents of Each County)

Age Cohorts	0-14	15-44	45-64	65+
State Average Rate	353	943	1,629	3,828
Average of County Rates	311	894	1,518	3,766
Standard Deviation of County Rates	156	234	408	847
Highest County Rate	982	1,702	2,580	6,402
Lowest County Rate	48	448	679	2,081
20% of the Counties Had Rates Above	393	1,017	1,732	4,211
20% of the Counties Had Rates Below	229	771	1,304	3,322

Source: Iowa State Department of Health, Compiled from data collected in the 1979 P.I.H.S.A Study.

The National Health Planning Guidelines for inpatient care set a national goal of 4 hospital beds for every 1000 persons, occupied at an average rate of 80 percent. If this goal is to be accomplished, the hospital usage rate would need to be no greater than 1168 patient-days per 1000 persons per year. This figure was arrived at by assuming that 4 beds would be occupied 80 percent of the time, or an average of 3.2 occupied beds per day (4 x 80% = 3.2). With an average of 3.2 patients per day per 1000 persons times 365 days in a year, the expected hospital usage rate would be 1168 (3.2 x 365 = 1168).

In 1977, there were 1237 patient-days per 1000 persons in the U.S. spent in non-federal short-stay hospitals. (3) Thus the hospital usage patterns identified in the most recently reported year exceed the 1168 patient-day goal, but not by a great amount. Table 4 shows the age-specific U.S. use rates for 1977 and the age-specific rates that would produce the national goal of 1168 patient-days, if the distribution of usage among age groups were to remain unchanged. For the 65 and older age group, Iowa's rate was already within the National Guideline Goal. The rates for other age groups exceeded the goals.

TABLE 4

Age-Specific Patient-Day Use Rates

AGE GROUPS	U.S. 1977	NATIONAL GUIDELINE GOAL	IOWA 1977
0-14	308	291	353
15-44	849	801	943
45-64	1,688	1,594	1,629
65+	4,156	3,925	3,828
ALL AGES	1,237	1,168	1,303

SOURCE: DHEW, Utilization of Short-Stay Hospitals, Series 13, No. 41, and Computations by Iowa State Department of Health.

In order to initially understand the reasons for the higher usage rates in the lower age groups and lower-than-expected rates in the elderly category, the hospital discharges were identified by diagnostic category. Table 5 compares the Iowa and U.S. rates for many causes of hospitalization. The rates for many disease categories that more greatly affect the elderly were substantially lower in Iowa than expected. Because of Iowa's high percentage of elderly citizens, this lower incidence of those hospitalized for these conditions appears to be significant. This factor might explain why the overall hospital usage rate for older persons is already below the National Guideline goals. No simple explanation is apparent for why the younger age groups have rates that are not only above the National Guideline goal, but also above the current national averages.

TABLE 5

Short-Stay Hospital Discharge Rates by Diagnostic Groups, 1977

(Rates Are Discharges per 100,000)

	IOWA	U.S.
1. Infective & Parasitic Diseases	637	395
2. Neoplasms	1,092	1,201
Malignant Neoplasms	767	814
Benign & Unspecified	312	387
3. Endocrine, Nutritional and Metabolic Dis.	325	443
Diabetes Mellitus	221	271
4. Dis. of Blood & Blood-Forming Organs	91	140
5. Mental Disorders	767	766
6. Dis. of Nervous System & Sense Organs	741	733
Central Nervous Dis.	143	169
Cataract	182	164
Dis. of Ear & Mastoid Process	169	176
7. Dis. of Circulatory System	2,015	2,243
Hypertensive Dis.	104	150
Acute Myocardial Infarction	208	195
Chronic Ischemic Heart Dis.	195	602
Cerebrovascular Dis.	351	301
8. Dis. of Respiratory System	1,729	1,628
Acute Bronchitis and Bronchiolitis	221	129
Acute Upper Resp. Infect. except Influenza	208	145
Pneumonia, All Forms	403	340
Hypertrophy of Tonsils & Adenoids	195	299
9. Dis. of Digestive System	2,236	2,025
Ulcers of Stomach, etc.	182	182
Appendicitis	182	156
Inguinal Hernia	208	236
Cholelithiasis	52	214
10. Dis. of Geritourinary System	1,677	1,680
Dis. of Urinary System	650	587
Hyperplasia of Prostate	130	127
Disorders of Menstruation	299	278
11. Complications of Pregnancy, Childbirth the Puerperium	1,937	2,004
12. Dis. of the Skin and Subcutaneous Tissue	260	271
13. Dis. of the Musculoskeletal System	819	893
Osteoarthritis and Allied Conditions	143	126
Arthritis and Rheumatism	117	134
Displacement of Intervertebral Disc	169	186
14. Congenital Anomalies	130	157
15. Certain Causes of Perinatal Morbidity and Mortality	195	130
16. Symptoms and Ill-Defined Conditions	702	329
17. Accidents, Poison & Violence	2,535	1,768
All Conditions	18,005	16,921

SOURCES: DHEW, Utilization of Short-Stay Hospitals, Series 13, No. 41, and 1977 P.I.H.S.A. Study, Iowa State Department of Health.

Among counties in Iowa, substantial variation exists in hospital usage rates for the same age groups. The information in Table 4 indicates the amount of variation existing among Iowa counties during the four-week period surveyed in the 1977 P.I.H.S.A. (Patient Information by Health Service Area) Study. This study, undertaken by the Iowa Hospital Association under contract with the Health Department, included all but three small hospitals in Iowa and also included 21 hospitals in adjoining states. The patient records were abstracted, patient names removed, and the data was recorded. The flow of patients from their counties of residence to their treatment hospitals was studied. Also examined, were the admission rate patterns of county residents and the patterns of principle diagnoses of those county residents. In order to get a better understanding of why such great variation exists in hospital usage by residents of different counties, the principle diagnoses of patients coming from the 20 counties with the highest admissions rates were compared with the diagnoses of patients coming from the 20 lowest admission-rate counties. The results in Table 6 compares the rate of admissions among high counties and low counties to determine whether there is any pattern in the diagnoses.

The average of the admission rates for all conditions in the 20 counties with the highest such rates is nearly double the average for all conditions in the 20 lowest counties. Some patterns appear in this sample data: (4)

1. Even among Iowa's 20 highest counties, the rates of hospitalization are lower in Iowa than the national rates for hypertensive disease, chronic ischemic heart disease, hypertrophy of tonsils and adenoids, inguinal hernia and gall bladder.

2. Even among Iowa's 20 lowest counties, the rates of hospitalization are higher in Iowa than the national rates for accidents, appendicitis, and symptoms of perinatal morbidity and mortality.

3. Acute Myocardial Infarctions (heart attacks) have a higher rate of hospitalizations in both groups of counties, than the national rate for that diagnosis.

4. For most other diagnostic categories, the Iowa rates for the highest counties exceeded the national rates and the rates for the lowest Iowa counties. These conditions included cancer, respiratory illnesses, strokes, digestive system illnesses, diseases of the genito-urinary system and arthritis and rheumatism.

TABLE 6

Hospital Admission Rates, By Diagnoses, Comparing 20 Counties with Highest Rates for All Conditions to 20 Counties with Lowest Rates (Rates Are Admissions/Discharges per 100,000 Persons in 1977)

Principal Diagnosis	Average of 20 Counties with Lowest Rates for All Conditions	highest Average of 20 Counties with Highest Rates for All Conditions	National Average Rate
All Conditions	13,440	23,960	16,921
Malignant Neoplasms (Cancer)	710	1,003	814
Benign & Unspecified Neoplasms	205	401	387
Diseases of Central Nervous System	108	246	169
Cataracts	135	243	164
Hypertensive Diseases	73	139	150
Acute Myocardial Infarction	217	199	195
Chronic Ischemic Heart Disease	145	267	602
Cerebrovascular Diseases	266	487	301
Acute Bronchitis	125	464	129
Upper Respiratory Diseases	139	274	145
Pneumonia	181	662	340
Hypertrophy of Tonsils and Adenoids	160	211	299
Diseases of the Digestive System	1,656	2,948	2,025
Ulcers	134	220	182
Appendicitis	186	214	156
Inguinal Hernia	167	207	236
Gall Bladder	58	68	214
Diseases of Urinary System	501	911	587
Prostate	118	155	127
Complications of Pregnancy	1,782	2,170	2,004
Osteoarthritis	124	217	126
Other Arthritis and Rheumatism	62	209	134
Symptoms of Perinatal Morbidity and Mortality	155	151	130
Accidents	1,945	3,433	1,768

SOURCE: 1977 P.I.H.S.A. Study, Iowa State Department of Health, Office for Health Planning and Development.

The lower hospitalization rates in Iowa for hypertension and heart disease may be illustrative of the lifestyle differences in a rural state. The rural nature of Iowa may also explain the increased rate for accidents. The rate differences among counties that are rural, for the same illness conditions, and with similar population characteristics, thus far is difficult to explain.

A general set of conclusions can be drawn from the data in Table 6. In counties where the rate of admissions for all conditions is high, the rate of admissions for each condition tends to be high. In counties where the rate of admissions for all conditions is low, the rate of admissions for each condition tends to be low. No particular condition or group of conditions explains the variation. Thus, in counties where the rates of hospitalization are high, the rates tend to be uniformly high for nearly all diagnostic categories examined - more people are hospitalized in those counties, across the board. These preliminary results need to be examined in much greater detail to determine why more patients are hospitalized in some counties than in others.

The National Guideline goals for hospitalization in American are predicated on the McClure Study (5) and a 1976 study by the Institute of Medicine. (6) These studies and many others (7) have indicated that some current hospital utilization is unnecessary or cost-ineffective. Based upon these studies and the increasing cost of inpatient hospitalization, the Secretary of Health, Education and Welfare issued the Guidelines establishing the National Goals. These goals are intended to reduce overutilization by reducing the stock of hospital beds. Presumably, the excess or unoccupied beds serve as a pressure on the medical community to unnecessarily recommend inpatient care. (8) It also represents a cost, passed on to payors, that could alternatively be invested in more and better outpatient capabilities. As illustrated in Table 7, Iowa hospitals do not entirely reinforce this theory. Comparing the 20 counties with the highest admissions rates to the 20 with the lowest, the following observations can be made:

1) Of the 20 counties with lowest rates, 16 have at least one hospital and four have no hospital. Two counties have two facilities, one county has three facilities and one county has four. In all but one of the counties the hospitals were substantially underoccupied in 1978.

2) Of the 20 counties with the highest rates, all had at least one hospital and five counties had two. In 15 of the counties all of the hospitals were substantially underoccupied in 1978, but in five of the counties the hospitals were at high average occupancy levels relative to the facility size.

Located in 20 Counties with Lowest/Highest Admission Rates

County	% of County Residents Hospitalized Within the County**	No. of beds at hospitals in the County	1978 Occupancy Percentage	Expected Occupancy Percentage *	Actual Exceeds Expected
20 Counties with Lowest Admissions Rates:					
Story	77	44	40	60	
		25	42	60	
		203	80	81	
Johnson	88	1103	76	80	
		234	76	81	
Lyon	29	30	24	60	
Worth	-0-	---	---	---	
Winnebago	30	35	23	60	
Winneshiek	61	97	46	60	
Sioux	62	27	27	60	
		30	58	60	
		28	37	60	
		26	47	60	
Emmet	50	121	22	74	
Osceola	48	32	51	60	
Kossuth	36	40	44	60	
Cedar	-0-	---	---	---	
Marshall	65	218	64	81	
Audubon	31	29	22	60	
Bremer	37	45	49	60	
		29	30	60	
Warren	-0-	---	---	---	
Hancock	38	32	46	60	
Tama	-0-	---	---	---	
Plymouth	46	16	33	60	
		44	55	60	
Allamakee	41	50	34	60	
Sac	39	33	65	60	X

County	% of County Residents Hospitalized Within the County**	No. of beds at hospitals in the County	1978 Occupancy Percentage	Expected Occupancy Percentage *	Actual Exceeds Expected
20 Counties with Highest Admission Rates:					
Monroe	58	51	62	60	X
Cass	74	106	81	72	X
Wayne	36	28	47	60	
Appanoose	67	72	61	66	
Decatur	74	54	67	60	X
Montgomery	70	80	67	67	
Union	67	83	51	67	
Van Buren	49	40	51	60	
Lucas	59	83	51	67	
Monona	52	48	69	60	X
Cherokee	70	120	38	73	
Crawford	73	90	56	68	
Lee	73	216	41	81	
		111	59	72	
		18***	22	60	
Ida	52	42	49	60	
Clarke	51	68	32	65	
Page	65	50	46	60	
		54	47	60	
Guthrie	37	37	41	60	
Fremont	75	83	57	67	
Marion	57	50	68	60	X
		36	62	60	X
Wapello	77	120	58	74	
		191	63	79	

* Expected rates are based upon the occupancy rate norms in the State Certificate of Need Bed Need Standard.

** Percentage distribution of patients from 1977 P.I.H.S.A. Study.

*** This facility closed in 1979.

SOURCE: Iowa State Department of Health, Office for Health Planning and Development.

If "beds beget patients" then the hospitals in high-use counties and low-use counties would be uniformly occupied at high levels. Such is not the case in Iowa. Thus, in Iowa, the Roemer effect does not appear to be a major influence in hospital usage: hospital use in Iowa is not necessarily higher in areas where beds are more plentiful.

This conclusion differs from the findings of another Iowa study. (9) That recent study compared the difference in county patient-day use rates and admission/discharge rates with 21 different variables. Their conclusions were that hospital use was higher in counties with:

1) "higher availability of hospital beds"
2) "increased availability of hospital beds over time" (growth from 1964-1977 in beds in the county)
3) "lower availability of long-term care beds" in the county and
4) higher proportion of residents with hospital insurance or government paid hospital care.

The lack of available pre-admission testing and the lack of available ambulatory surgery services were also listed as factors associated with counties that had higher rates of hospitalization, although the correlations were not as strong as for the other factors.

The research into the causes of high usage rates thus far has pointed out the complexity of the issues involved. Perhaps a definitive study will one day provide the answer. Until then, at least one point can be made: Unnecessary usage of inpatient facilities is expensive and it perhaps subjects the patient to some unnecessary risk. If excess beds in an area create an atmosphere which stimulates unnecessary utilization, or does little to discourage it, then the costs are considerable. The costs associated with the overhead represented by unused or excess capacity will be discussed later in this chapter.

What should be the goal level of hospitalization rates in Iowa?

The national rates for hospitalization, derived from the National Health Planning Guidelines, was identified earlier as being 1168 patient-days per 1000 persons per year. Of course, this is a goal based upon the national population distribution. Iowa's population, however, has a substantially greater percentage of elderly, and elderly persons have greater needs for inpatient care. Table 8 demonstrates this difference.

TABLE 8

Projected Percentage of Population Over Age 65, Iowa and U.S.

	U.S.	IOWA
1975	10.66*	12.64
1980	11.22	13.01
1985	11.72	13.36
1990	8.55	13.55
1995	12.42	13.49
2000	12.22	13.10

* July 1976 Estimates

SOURCES: U.S. Bureau of Census, Current Population Reports, Series P-25, No. 614 and 704 and Iowa Office for Programming and Planning, Series May, 1979.

In order to determine an inpatient use rate for Iowa that would be consistent with the National Guideline goals of 1168 for the nation, some adjustments must be made to compensate for the larger elder population in Iowa. The method that has been adopted in this plan involves age-adjusting the 1168 to a larger number by more heavily weighting the impact that older patients have upon the average. Table 9 illustrates the relative weights of each age group upon the national average patient-day use rate and estimates the rates for specific age groups that would be consistent with a target average of 1168.

TABLE 9

Age-Specific Hospital Use Rates, 1977 Actual U.S. Rates and Estimated Target Rates

Age Group	1977 U.S. Patient Days/ 1,000 Persons	Relative Weight Using Average = 1.00*	Estimated Age-Specific Patient-Days/1,000 (Using 1168 as Projected Average for All Ages)**
Average of All	1236.7	1.000	1168
0-14	308.2	.249	291
15-44	849.2	.686	801
45-64	1688.3	1.365	1594
65+	4156.3	3.360	3925

* The rate for each age group is divided by 1236.7 to determine the relative weight which that group has upon the average rate.

** To estimate the age-specific patient-day use rates that would produce an average of 1168 for all ages combined, multiply the relative weights times 1168. This assumes that the relationship between the use rates of the various age groups remain constant.

SOURCE: DHEW, Utilization of Short Stay Hospitals, 1977.

TABLE 10

Age Specific Hospital Use Rates, Iowa Target Rates, 1986

Age Groups	(1) Estimated Age-Specific Patient-Days/1,000 (Using 1,168 as Projected Average for All Ages)	(2) 1986 Iowa Population Projection (In 1,000's)		(3) Column (1) x Column (2)
0-14	291	687.085		199,941.7
15-44	801	1,369.060		1,096,617.1
45-64	1,594	550.840		878,039.0
65+	3,925	403.340		1,583,109.5
Average of All	1,168			
Total		3,010.325	divided into	3,757,707.3 = 1,248

SOURCE: Population Projections from Official Iowa Population Projections, Iowa Office for Programming and Planning, Series May, 1979.

Applying those rates for specific age groups to the Iowa population distribution, as projected for 1986, the state average target was derived to be 1248 patient-days per 1000 persons per year. That rate is equivalent to the national goal of 1168. The difference between the national goal and the Iowa goal is, thus, accountable by the difference in the age distribution of the population.

Comparing the Iowa 1986 hospitalization rate goal of 1248 to the 1978 actual rate of 1268, indicates just how closely the current Iowa experience approximates the goal to be achieved. The 1978 patient-day use rate in Iowa was only 1.58 percent higher than the goal to be achieved by 1986.

Thus, while there may be county-to-county and age group variations in hospital use rates, the state average rate is pretty close to its target and excess utilization is not a severe problem in Iowa. Where it is possible to do so further reductions in inpatient care should be encouraged.

GOAL 2: REDUCE INAPPROPRIATE HOSPITALIZATIONS OF IOWA CITIZENS.

Objective 1: By 1986, a state average inpatient utilization rate of no more than 1248 patient-days per 1000 persons per year.

In order to implement this objective, five action steps are recommended. Two of the actions involve baseline research into the causes for rate variations, one involves evaluating state laws and programs to identify those which are inconsistent with achievement of this objective.

LRRA 1: By 1983, the Department will complete an analysis of the reasons for use-rate variation among Iowa's counties, in order to establish appropriate variances in the expected county use rates.

LRRA 1a: By 1985, the Department will complete a utilization study to determine potential optimim utilization levels for different age groups in Iowa.

LRRA 1b: By 1985, the Department will analyze state legislation and programs which can provide an incentive for encouraging outpatient treatment as an alternative to inpatient care wherever possible. The Department will also seek to identify programs and laws which provide an incentive for inpatient usage, so that those programs and laws may be changed.

What efforts are currently underway to reduce the occurance of any unnecessary utilization and to reduce hospitalization even further?

Among the most potentially significant developments to follow the establishment of the Medicare program was the establishment of the Professional Standards Review Organization (P.S.R.O.). The P.S.R.O. is a federally-funded agency which provides peer review of the quality and utilization of services for medicare patients. Their purpose is to reduce federal expenditures for Medicare to the lowest level possible by assuring that patients are placed in the appropriate level of care and are treated no longer than is medically necessary. In Iowa, the agency which has been designed as the P.S.R.O. is the Iowa Foundation for Medical Care.

In its first year of utilization reviews in Iowa (1977), the number of medicare hospital admissions dropped by 758 at a time when there were nearly 6400 more eligible medicare recipients. During that year, the elderly patient-days fell by seven percent and the elderly average length of stay dropped from 10.7 to 10.0 days. (10) The then-president of the Foundation, Dr. J. H. Brinkman, M.D., commented that "with hospital costs averaging $150 a day, this potentially represents a significant amount unspent on hospitalization." (11) Just a bit over $18 million was saved, even if no account is made for the increased number of eligible recipients.

Dr. Brinkman suggested in 1978 that "the benefits of utilization and quality review should be available to all hospital patients". (12) Toward this end several private insurers have contracted with the Foundation to perform utilization reviews. The effectiveness of these reviews in eliminating hospital days that are not medically necessary was demonstrated in a study released in March, 1980. (13) The study included Foundation-review Blue Cross and John Deere patients (patients who are provided hospitalization benefits as employees or families of employees of John Deere and Company). The patient records were examined during calendar year 1978 and the first three quarters of 1979, and in order to determine the degree of impact a comparable group of non-reviewed patients was examined.

According to the foundation:

> "Although the absolute length of stay of IFMC-reviewed patients has remained stable over the seven quarters, the increase in the length of stay for matched patients and the increase in the difference between the length of stay of reviewed patients and non-reviewed patients demonstrates an increase in the severity of illness of IFMC-reviewed patients."

Table 11 displays the results of their study.

TABLE 11

REDUCTIONS IN UTILIZATION AMONG IFMC-REVIEWED BLUE CROSS AND DEERE AND COMPANY PATIENTS

QUARTER AND YEAR		% OF HOSPITALS REPORTING *		MEAN LOS		MEAN LOS OF MATCHED PATIENTS		DIFFERENCE IN LOSs (COL. 3 LESS COL. 4)		PERCENTAGE OF LONG STAY PATIENTS	
		Blue Cross	John Deere	Blue Cross	John Deere	Blue Cross	John Deere	Blue Cross	John Deere	Blue Cross	John Deere
1st	1978	5	6	4.8	5.2	5.1	5.0	-.3	+.2	20.2%	19.6%
2nd	1978	11	10	5.1	5.3	5.2	5.1	-.1	+.2	19.1%	19.8%
3rd	1978	19	14	4.9	5.5	5.1	5.2	-.2	+.3	16.3%	20.9%
4th	1978	29	20	5.0	5.7	5.3	5.3	-.3	+.4	14.2%	18.0%
1st	1979	37	24	5.1	5.4	5.8	5.7	-.7	-.3	10.7%	12.7%
2nd	1979	39	25	5.0	5.3	5.7	5.6	-.7	-.3	10.3%	11.9%
3rd	1979	43	26	4.8	4.9	5.6	5.5	-.8	-.6	7.6%	8.1%

*Only HSDS data are included.

SOURCE: Iowa Foundation for Medical Care.

Thus even in the early years of the P.S.R.O. reviews, when baseline data is still being accumulated, it can be seen that their reviews do affect reductions in unnecessary hospitalizations. These reviews, when accompanied by a program of pre-admission testing and the local availability of medically-accepted alternatives to inpatient care can appreciably reduce unnecessary health care costs.

To the three action steps listed earlier, these additional two actions are aimed at assisting in the efforts to reduce the state average use rate below the 1248 per 1000 objective:

LRRA 1c: By 1983, the Department will study the feasibility of drafting legislation to establish utilization and quality review, by appropriate P.S.R.O. groups, for consumers covered by third-party payers.

SRRA 1a: By 1982, the Department will begin monitoring the aggregate in-patient utilization rates in Iowa. These annual reports will be made available to the P.S.R.O., the SHCC and interested persons.

Alternatives to Acute Care

Acute care has components that somewhat overlap other modes of health care. For instance, older rural residents are often hospitalized for conditions that could be treated in skilled care facilities or by public health nurses, except that those alternative services aren't always available. This is but one example of how acute care services are provided in the absence of less costly alternatives.

Some hospitalizations occur because there is a lack of alternative outpatient delivery systems available in the area. Traditionally, third-party payors have tended to reimburse only for inpatient services, however trends have been recently established for third-party payment of services that can appropriately be performed on an outpatient basis.

The Iowa Health Systems Agency, in their 1980-85 Health Systems Plan, analyzed the outpatient alternatives. Their analysis is included below:

Providing care on an outpatient basis rather than on an inpatient hospital basis can result in a reduced number of inpatient days of care. These reductions can be classified into three basic categories:

—*Providing the same basic procedures on an outpatient basis; thus, an inpatient admission is eliminated. An example of this would be "day surgery";*

—*Providing some of the same basic procedures on an outpatient basis either prior to or following an inpatient admission; thus, the length of inpatient stay is reduced. An example would be preadmission testing; and*

—*Substituting a mode of treatment that can be provided on an outpatient basis for a mode that requires treatment on an inpatient basis; again an inpatient admission is eliminated. For example, some pediatricians suggest that over 90% of the one million children who underwent tonsillectomies in 1974 in the United States did so unnecessarily. The substitution would be administering antibiotics. (14)*

Cost savings and reduced emotional trauma (especially for children) are probably the main benefits to be derived from shifting certain types of treatment from the inpatient hospital setting to an outpatient setting. Both the short and long run savings per patient day need to be examined. For example, the daily hospital room rate at the present time is approximately $90. This $90 rate also approximates the cost. Of this $90 cost, approximately 30% ($27) is variable and 70% ($64) is fixed. For each inpatient day saved, the short run savings would be $27 and the long run savings (when hospital capacity is adjusted) would be the full $90. Another way to view cost savings would be to examine the savings per procedure. For example, in the area of ambulatory (day) surgery, estimates of average savings per procedure range from $100 to $250. This wide range results in part from charge structure and cost allocation variations among different institutions. A recent study of ambulatory surgery by North Carolina Blue Cross-Blue Shield reported that cost savings of 49% to 77% could be realized on seven frequently performed surgical procedures by the elimination of a one-to two-day hospital stay.

Currently, many providers and consumers are biased in favor of inpatient services, even when comparable hospital-based outpatient services are mose cost-effective and would result in identical or improved health outcomes. Lack of information and certain financial biases encourage this favoring of inpatient services.

The consumer may assume that a service should be provided on an inpatient basis simply because this is the most publicized setting. For example, if an individual faces a setting choice on a particular service and remembers a friend or relative who received that service on an inpatient basis, then the individual may think that to receive a high quality service it should be performed on an inpatient basis.

Not enough emphasis has been placed on establishing that certain procedures may be performed on an outpatient basis with quality comparable to procedures performed on an inpatient basis. Providers, therefore, tend to continue to provide tense procedures on an inpatient basis. For example, proponents of day surgery have indicated that at least 15% and upwards to 73% of all surgery now performed in the short stay inpatient setting could be safely performed in a day surgery unit. The following table illustrates the extent to which procedures can be performed on a day surgery basis.

TABLE 12

MOST COMMONLY PERFORMED INPATIENT PROCEDURES

Rank	Procedure	Rate Per 10,000 Patients
1	*Dilation and Curettage	704.6
2	*Tonsillectomy and Adenoidectomy	399.9
3	*Other Excision and Suture of Skin	388.3
4	Abdominal Hysterectomy	338.8
5	*Unilateral Repair of Inguinofemoral Hernia	313.7
6	Cholecystectomy	281.7
7	*Incision and Excision of Breast	251.5
8	*Cystoscopy and Urethroscopy	239.5
9	Intracapsular Lens Extraction	215.0
10	Appendectomy	190.2

*Commonly Performed on Day Surgery Basis

SOURCE: "Day Surgery Services and Facilities", Health Facility Planning Guide, Hospital Survey Committee, 1976.

coverage rather than as an optional benefit (i.e., no additional premium), wide publicity to both consumers and providers, and no imposition of unrealistic administrative burdens on providers.

A more recent development involves the Central Iowa Health Association (formally the Des Moines-based Business Group on Health). One of this group's priorities is outpatient benefits and programs. The basic objective of the committee in this area is the development of cost-effective alternatives to inpatient care in Des Moines hospitals.

Incentives in the financing mechanisms of federal health care programs often favor treatment performed in a hospital, and fail to reimburse less costly modes for treating the same condition. This unintended policy is also compounded by the exclusion of physician's assistants and nurse practicians from reimbursement programs. Except in the rare instance of a physician's assistant or nurse practitioner working in an area designated as medically underserved, the professional extender cannot qualify for Medicare and Medicaid reimbursement. Without reimbursement, there is no financial incentive to establish a clinic in many rural areas that could benefit from such service. Consequently, reimbursement policies generally continue to encourage consumers to seek treatment in more costly inpatient settings.

Another development that affects acute care in Iowa is the possibility of a prepaid medical plan. Such plans could include Health Maintenance Organizations (HMOs), Independent Physician Associations (IPAs) and medical foundations, and refer to systems where subscribers prepay to providers for anticipated services. Unlike insurance companies, these plans take responsibility for arranging for and providing needed services as well as paying for them.

The funding mechanism places the incentive on consumers and professionals to seek the least costly means of getting well and staying well. The prototypes of these systems appear to be able to provide high quality care for lower costs in the major metropolitan centers. They have not yet demonstrated their value in more rural and less populated communities. Currently the Central Iowa group is studying whether the cost savings can be comparable. If so, the plans should be tried in other Iowa cities.

These innovative programs might reduce the cost of delivering health care in Iowa and their progress should be watched closely in the future. (For further information see Chapter Four: Primary Care)

Other efforts to reduce unnecessary inpatient usage have been undertaken by hospitals in Iowa through the availability of ambulatory surgery services. Table 13 lists the hospitals that have ambulatory surgery services, that do pre-admission testing of consumers and those that offer an organized program for educating consumers as to how they may assist in their treatment program. Future research may indicate the extent of the savings realized by these efforts.

TABLE 13

Availability of Alternative Services at Iowa Hospitals, 1979

Facility/County	Ambulatory Surgery Services Available	Pre-Admission Testing Available	Organized Patient Health Education Available
Rosary - Adams		X	X
Veteran's Memorial - Allamakee	X		
Community Memorial - Allamakee	X	X	X
Virgina Gay - Benton	X	X	
Schoitz - Black Hawk	X	X	X
Sartori - Black Hawk	X	X	X
Allen - Black Hawk	X	X	X
St. Francis - Black Hawk	X	X	X
Boone County		X	
Alta - Buena Vista	X	X	
Buena Vista County	X		
Stewart - Calhoun	X		X
Manning - Carroll	X	X	X
Cass County		X	X
North Iowa - Cerro Gordo	X	X	X
St. Joseph Mercy - Cerro Gordo	X	X	X
Sioux Valley - Cherokee		X	
St. Joseph - Chickasaw	X		
Clarke County	X		
Spencer - Clay	X	X	
Guttenberg - Clayton	X	X	
Jane Lamb - Clinton	X	X	X
St. Joseph Mercy - Clinton	X		
Crawford County		X	
Davis County	X		X
Delaware County	X	X	X
Burlington - Des Moines	X	X	
Dickinson County	X		
Mercy - Dubuque	X	X	X
Finley - Dubuque	X	X	X
Xavier - Dubuque	X		
Palmer - Fayette	X		X
Mercy - Fayette	X		
Franklin General - Franklin	X	X	
Grundy County		X	
Hamilton County		X	
Hancock County	X	X	
Ellsworth - Hardin	X		
Eldora - Hardin	X	X	
Henry County	X	X	
Humboldt County	X	X	
Skiff - Jasper			X
VA - Johnson		X	X
U of I - Johnson	X	X	X
Mercy - Johnson	X	X	X
John McDonald - Jones	X		
Kossuth County			X
Ft. Madison - Lee		X	X
Keokuk - Lee	X	X	X
St. Lukes - Linn	X	X	X
Mercy - Linn		X	X
Lucas County	X		X
Pella - Marion	X		
Marshalltown - Marshall	X	X	X
Mitchell County	X	X	
Monroe County			X
Muscatine	X	X	
Osceola	X	X	X
Municipal - Page	X		
Palo Alto County		X	X
Des Moines General - Polk	X	X	
VA - Polk	X		
Iowa Lutheran - Polk	X	X	
Mercy - Polk	X	X	X
Iowa Methodist - Polk	X	X	
Broadlawns - Polk	X	X	X
Northwest - Polk	X		X
Mercy - Pottawattamie	X		
Jennie Edmundson - Pottawattamie	X	X	X
Grinnell - Poweshiek			X
Davenport Osteopathic - Scott	X		X
Mercy - Scott		X	X
St. Lukes - Scott	X		
Community - Sioux		X	
Story City - Story	X	X	
Mary Greeley - Story	X	X	
Greater Community - Union		X	
Ottumwa - Wapello			X
St. Joseph - Wapello	X		
Washington County	X		
Trinity - Webster	X	X	
Forest City - Winnebago	X	X	X
Marian - Woodbury	X	X	X
St. Lukes - Woodbury	X	X	X
Belmond - Wright			X
Non-Federal	64	55	42
V.A. Hospitals	1	1	1
Total	65	56	43

SOURCE: Annual Report on Hospitals, Iowa State Department of Health.

Making the Acute Care System More Efficient

In order to identify areas of acute care delivery that could be provided efficiently, a description of the current system seems to be a first order of business.

The acute care delivery system in Iowa consists of facilities providing inpatient care and those providing outpatient care. All hospitals in Iowa provide inpatient care and some also provide outpatient acute care. Some outpatient acute care is also provided outside of a hospital setting. At this time non-hospital based outpatient acute care has not be inventoried and an analysis of this system will have to be dealt with in future plans. A substantial data base, however, is available on hospital-based acute care because of the numerous licensing and accreditation surveying accumulated over the years.

In 1980, there were 131 non-federal acute care hospitals in Iowa. Additionally, there were two federally-supported Veterans Administration hospitals, one in Iowa City and one in Des Moines. The two federal hospitals serve a specialized clientele. The federal hospitals are specifically exempted from many of the National Guidelines requirements, and thus will be omitted from the discussions that follow. All reference to acute care hospitals and acute care beds and services will deal with the non-federal system in Iowa.

In 1979, Iowa had 132 non-federal hospitals at the beginning of the year and 131 by the end. (17) The Hartley Memorial Hospital in Battle Creek closed in September as the result of low utilization and high costs. By the end of 1979 there were about 15,900 short term beds in those 131 hospitals. The exact count of beds varies from one survey to the next as the result of misunderstanding the definition of a usable bed and as the result of some facilities shifting their balance of short term-to-long term beds. The average occupancy rate in 1978 was 63 percent and the rate varied substantially with the size of the facility. Table 14 shows the range of occupancy rates of different size hospitals.

TABLE 14

IOWA HOSPITAL STATISTICS, 1978

Usable Bed Size	No. of Hospitals	Average Usable Bed Size of Hospitals	% Occupancy	Average Length of Stay
6-24	6	19	37	6.1
25-49	47	36	46	5.5
50-99	35	69	54	5.7
100-199	20	129	58	6.2
200-299	11	246	68	6.3
300-399	4	328	64	6.8
400-499	4	430	71	7.1
500+	5	685	75	7.9
Total	132	121	63	6.6

SOURCE: Annual Report of Hospitals, Iowa State Health Department.

The smallest hospitals are generally the sole county facility, primarily serving emergency and obstetric needs of the county residents. Because consumers of obstetric services cannot be easily scheduled to fit the optimum occupancy of the hospital, the hospital's daily census will fluctuate greatly.

Table 15 shows the aggregate 1978 hospital statistics. The average occupancy rate for all facilities for medical/surgical units, psychiatric units, and detoxification and rehabilitation units was about 65 percent. On the other hand, the average rate for obstetric units was 46 percent and for pediatric units was 49 percent.

These rates seem low. However, a number of factors affect a facility's occupancy rate, including whether the beds are in single or multiple-bed rooms. For multiple-bed rooms the facility must attempt to place together patients of the same sex, same smoking preference, similar age, among other factors. This might leave a bed empty in a multiple-bed room in order to avoid an inconvenient mismatch.

TABLE 15

IOWA HOSPITAL STATISTICS, 1978

DESIGNATED UNIT	SERVICES	DESIGNED BED CAP	USABLE BEDS	STAFFED BEDS	ADMIS-SIONS	PATIENT DAYS	PERCENT OCCUPANCY	AVERAGE L.O.S.
132	MED/SURG	12362	12002	11156	415819	2852391	65.1	6.8
23	(ICU)		192		9175	38242	54.5	4.1
28	(COR)		205		16190	39446	52.7	2.4
78	(MIXED)		375		16683	65235	47.6	3.9
12	(NEO)		139		5451	40859	80.5	7.5
49	PED	1112	1101	1016	45959	195885	48.7	4.2
108	O B	1218	1170	1069	51139	195267	45.7	3.8
20	PSYCH	739	740	728	13867	203669	75.4	14.6
8	DETOX	205	195	182	3672	45666	64.1	12.4
6	REHAB	183	182	170	1124	40554	61.0	36.0
6	OTHER	554	551	512	19709	137734	68.4	6.9
TOTAL ACUTE CARE		16373	15941	14833	551289	3671166	63.1	6.6
	SWING				456	15621		34.2
TOTAL LONG TERM CARE		1493	1502	1439	2694	471869	86.0	175.1

MONTHLY VARIATIONS IN TOTAL ACUTE CARE SERVICES

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
ADMISSIONS	50150	42866	48514	45687	46412	45454	45179	46854	43287	46373	44351	40574
PATIENT DAYS	338861	297914	328125	308115	309472	297111	292839	300789	290557	308121	296919	275397
% OCCUPANCY	68.5	66.7	66.4	64.4	62.6	62.1	59.2	60.8	60.7	62.3	62.0	55.7
HIGHEST CENSUS	13070	12600	12594	12305	11971	11551	11718	11738	11827	11591	11962	11437
AVERAGE CENSUS	10931	10640	10585	10271	9983	9904	9446	9703	9685	9939	9894	8884
LOWEST CENSUS	7746	8620	8203	8205	7529	7490	7461	7531	7483	7966	7354	5657

AVAILABLE SELECTED SERVICES

59 SPEECH THERAPY	8 OPEN HEART SURG	67 AMB SURG SERV	73 PREADMISS TEST	29 PREM NURSERY
40 CHEMICAL THER	14 CARD CATH	67 AMB SURG UNIT	2 SELF CARE UNIT	63 EEG
116 PHYSICAL THER	22 ANGIOCARD	1 ORGAN BANK	26 OUTPT REHAB	20 EMG
112 RESP THER	47 HISTOPATH LAB	2 ORGAN TRANS	7 HOME CARE DEPT	23 PSYCH OUTPT
34 OCCUP THER	102 BLOOD BANK	3 DIALYS TRAIN	72 SOCIAL WORK	33 PSYCH EMEF
5 CT HEAD	27 PROSTH & ORTH	8 ESRD UNIT	7 GENETIC COUN	12 CLIN PSYCH
8 CT BODY	2 BURN CARE UNIT	8 HEMODIAL INPT	4 CHROM ANAL	26 OUTPT DEPT
5 CT MOBILE	9 LIN ACCEL	65 DENTAL	20 ABORTION INPT	15 ELEC CON THER
38 ULTRASOUND	10 COBALT	29 PODIATRIC	12 ABORTION OUTPT	23 SWING BEDS

SOURCE: Annual Report of Hospitals, Iowa State Department of Health

In small, rural hospitals the low rate of occupancy may be a function of hospitals built during a population-growth era, but the low rate is also a function of small numbers. An extra bed or two that would accommodate the peak period fluctuation has little impact upon the occupancy rates of hospitals with 20-30 bed obstetrical and pediatric units. Those same extra beds when added to a 3-5 bed unit will have a substantial statistical impact, even though the costs of that excess capacity may not really be significant.

Table 16 shows that the size of the facility affects the occupancy rate for each of the three major service units, medical/surgical, pediatric and obstetric. The smaller facilities have rates of occupancy in each of the service areas that are less than half as great of the rates in the large hospitals. These smaller facilities are nearly always in rural areas. In most cases they were built with monies provided by the federal Hill-Burton program in the 1950's. In most cases their mortgages are no longer substantial. In most cases their charges are lower than those found in the larger facilities as the result of a lower need to provide the more complex equipment and services required in a secondary or tertiary facility. In most cases the small rural hospitals provide necessary accessibility for emergency and obstetrical services to the rural population. And, in most cases the cost of remodeling or replacing the excess facilities with a smaller, more appropriately-sized facility would be more expensive than to continue to tolerate the unused bed space. Thus, the excess bed capacity in Iowa's rural hospitals does not pose a costly burden on health care consumers. Of course, when those hospitals will need to be remodeled, in order to comply with changing fire and safety and accreditation requirements, consideration should be given to eliminating the unneeded capacity.

TABLE 16

IOWA HOSPITAL STATISTICS, 1978

SERVICE OFFERING	BED SIZE CATEGORY	NO HOSP	DESIGNED CAPACITY TOTAL	DESIGNED CAPACITY AVG	USABLE CAPACITY TOTAL	USABLE CAPACITY AVG	STAFFED BEDS TOTAL	STAFFED BEDS AVG	ADMISSIONS TOTAL	ADMISSIONS AVG	PATIENT DAYS TOTAL	PATIENT DAYS AVG	% CCC	ALOS
MED-SURG	6-24	6	105	18	103	17	103	17	2327	388	14726	2454	39.1	6.3
	25-49	47	1532	33	1488	32	1357	29	44894	955	261448	5563	48.1	5.8
	50-99	35	2245	64	2185	62	1952	56	75520	2158	450311	12866	56.4	5.9
	100-199	20	2098	105	2050	103	1943	97	69786	3489	462549	23127	61.8	6.6
	200-299	11	1998	182	1915	174	1831	166	76376	6943	519291	47208	74.2	6.8
	300-399	4	1040	260	919	230	836	209	33014	8254	234471	58618	69.9	7.1
	400-499	4	1204	301	1204	301	1071	268	43947	10987	326711	81678	74.3	7.4
	500- +	5	2140	428	2138	428	2063	413	69955	13991	582884	116577	74.6	8.3
	TOTAL	132	12362	94	12002	91	11156	85	415819	3150	2852391	21609	65.1	6.8
PEDS	6-24	1	2	2	2	2	2	2	41	41	179	179	24.5	4.3
	25-49	5	15	3	15	3	15	3	473	95	1523	305	27.8	3.2
	50-99	7	35	5	32	5	32	5	1559	223	4750	679	40.6	3.0
	100-199	12	198	17	194	16	181	15	6159	513	25557	2130	36.0	4.1
	200-299	11	280	25	278	25	253	23	12397	1127	41926	3811	41.3	3.3
	300-399	4	138	35	138	35	133	33	4672	1168	19295	4824	38.3	4.1
	400-499	4	172	43	170	43	138	35	8880	2220	33791	8448	54.4	3.8
	500- +	5	272	54	272	54	262	52	11778	2356	68864	13773	69.3	5.8
	TOTAL	49	1112	23	1101	22	1016	21	45959	938	195885	3998	48.7	4.2
O B	6-24	3	12	4	10	3	10	3	161	54	667	222	18.2	4.1
	25-49	36	174	5	170	5	154	4	4687	130	16197	450	26.1	3.4
	50-99	28	213	8	204	7	180	6	6545	234	23095	825	31.0	3.5
	100-199	17	234	14	229	13	204	12	8543	503	30661	1804	36.6	3.5
	200-299	11	240	22	215	20	202	18	11045	1004	43160	3924	55.0	3.9
	300-399	4	72	18	70	18	66	17	3115	779	14151	3538	55.3	4.5
	400-499	4	120	30	120	30	103	26	5465	1366	22169	5542	50.6	4.0
	500- +	5	153	31	152	30	150	30	11578	2316	45167	9033	81.4	3.9
	TOTAL	108	1218	11	1170	11	1069	10	51139	474	195267	1808	45.7	3.8
TOTAL ACUTE	6-24	6	119	20	115	19	115	19	2529	422	15572	2595	37.1	6.1
	25-49	47	1721	37	1673	36	1526	32	50054	1065	279168	5940	45.7	5.5
	50-99	35	2493	71	2421	69	2164	62	83624	2389	478156	13662	54.1	5.7
	100-199	20	2628	131	2571	129	2426	121	86168	4308	542386	27119	57.8	6.2
	200-299	11	2816	256	2701	246	2536	231	104457	9496	666644	60604	67.6	6.3
	300-399	4	1436	359	1312	328	1218	305	44830	11208	307151	76788	64.1	6.8
	400-499	4	1723	431	1721	430	1520	380	62451	15613	448309	112077	71.3	7.1
	500- +	5	3437	687	3427	685	3328	666	117176	23435	933780	186756	74.6	7.9
	TOTAL	132	16373	124	15941	121	14833	112	551289	4176	3671166	27812	63.1	6.6

Currently, the cost of building a new hospital bed is between $50,000 and $120,000. Add to that cost a substantial cost for borrowing the capital and the continuing costs of maintenance and energy, and it should be evident that unneeded new capacity would place a great cost on society.

The cost of a currently unoccupied bed has not been estimated with any degree of precision. Once the excess has been built, the construction and capital cost become fixed expenses. To some degree maintenance and energy costs are also fixed expenses. Staffing, however, is a variable cost and Iowa hospitals have curtailed the number of beds staffed in accordance with occupancy patterns. There are irreducible levels of staffing, necessary in order to maintain a service at a hospital, and the costs per consumer go up when the staff are working below their capacity also. More about this later.

Rural hospitals that are operating below their desired capacity level, and that are the only facility within their county, and that are minimally staffed, are probably not a costly problem in Iowa. Rural hospitals in counties with more than one hospital, where all of those hospitals are below capacity involve a different set of considerations. The costs may also be substantial in major metropolitan communities with more than one hospital and many excess beds. In the case of the availability of more than one hospital, the residents are assured of adequate service accessibility. Consideration should then be directed toward providing the most efficient means of consolidating facilities and services and eliminating as much of the unused capacity as possible. In so doing, overhead and irreducible staff and energy costs might be trimmed from the delivery system with no sacrifice to consumer needs.

Table 17 shows the distribution of Iowa's hospitals. Sixty-four counties had only one facility in 1979, and eight counties had no hospital. Of the 27 counties with more than one facility, 10 are urban communities, 14 are rural and 3 fall somewhere in-between.

TABLE 17

DISTRIBUTION OF IOWA'S HOSPITALS, 1979

	Only Facility in County	Two or More Facilities in County
Rural Counties[a]	57	14[d]
		3[e]
Urban Counties[b]	7[c]	10[f]
Total	64	27

Notes:

(a) A rural county is here defined as one in which none of the county's communities contains at least 10,000 persons.
(b) An urban county is here defined as one in which at least one community in the county contains at least 10,000 persons.
(c) Includes the following counties: Boone (Boone), Clay (Spencer), Des Moines (Burlington), Jasper (Newton), Marshall (Marshalltown), Muscatine (Muscatine), and Webster (Ft. Dodge).
(d) Includes the following counties: Allamakee (2 facilities), Bremer (2), Buena Vista (2), Carroll (2), Clayton (2), Fayette (2), Hardin (2), Jones (2), Marion (2), O'Brien (3), Page (2), Plymouth (2), Sioux (4), Wright (2).
(e) These counties include an urban community with one or more hospitals and at least one rural town with a hospital: Clinton (two facilities in Clinton and one in DeWitt) and Story (one facility in Ames, one in Nevada and one in Story City). Lee County has one facility each in Ft. Madison and Keokuk.
(f) Includes the following counties: Black Hawk (Waterloo with 4 facilities), Cerro Gordo (Mason City, 2), Dubuque (Dubuque, 3), Johnson (Iowa City, 2), Linn (Cedar Rapids, 2), Polk (Des Moines, 6), Pottawattamie (Council Bluffs, 2), Scott (Davenport, 3), Wapello (Ottumwa, 2), and Woodbury (Sioux City, 2).

SOURCE: Iowa State Department of Health.

Using a projection of future inpatient bed needs for each facility, from the Certificate-of-Need Standard adopted by the SHCC in 1979, the number of excess hospital beds at each facility can be estimated. Using that methodology, the number of excess beds projected for 1987 are 2465. (The methodology will be described in greater detail later in this chapter). Table 18 shows the distribution of those excess beds.

TABLE 18

DISTRIBUTION OF EXCESS INPATIENT BEDS IN IOWA, 1987*

	Excess Beds In Only Facility in County	No. of Facilities	Excess Beds In Two or More Facilities in County	No. of Facilities
Rural Counties	714	57	243	31
			95	8
Urban Counties	205	7	1,208	28
	919	64	1,546	67

*Using Certificate of Need Acute Care Bed Needs Methodology.

SOURCE: Iowa State Department of Health.

Those facilities that account for 919 excess beds fall into that category where unnecessary costs are minimal and irreducible in the short-run, if accessibility is to be provided to the county's residents.

The 338 excess beds located in counties with several small hospitals suggest an area where consolidation might be reasonable. And the 1208 excess beds located in metropolitan communities present the greatest potential for eliminating duplicative and costly overhead. In 1981, the Department and the State's HSA's will be considering the issues of unnecessary duplication and the means by which to provide the most efficient acute care possible. The process, known as "appropriateness review," is a more detailed way of concentrating research efforts towards planning for the solution of specific problems. Excess inpatient bed capacity and the evolving trend to less-costly outpatient treatment will be dealt with

in greater detail during that review. The results will be included in future SHP's including some suggested alternative uses for the excess bed space.

CONSIDERATION OF THE NATIONAL GUIDELINES FOR ACUTE CARE BED CAPACITY

The national guidelines for inpatient acute care beds establish a target rate of no more than four beds per thousand persons in the country. The target rate for hospital occupancy has been set at an average rate of 80 percent.

Within the criteria for the application of the national guidelines are specific exemptions and modifications. States may demonstrate a justification for an exemption or modification of the four beds per thousand persons guideline if they have (1) "...ratios for health service areas in which the percentage of elderly people is significantly higher (more than 12 percent of the population) than the national average..." and/or

(2) "...rural areas in which a majority of residents would otherwise be more than 30 minutes travel time from a hospital ..." (18)

These exemptions permit states to adjust the standard of four beds per thousand persons if those states have a high percentage of elderly citizens. Elderly persons would be expected to have a higher usage need, for inpatient acute care facilities. Additionally, a dominantly rural state will have a more geographically dispersed population. The location of hospitals is an important factor in assuring equal access to acute care services for all citizens. The guidelines may thus be a problem should compliance with the four-bed standard imply closing facilities without which accessibility would be denied to rural citizens.

In Iowa, both of these justifications are applicable. The elderly population in Iowa is currently above the 12 percent standard and is projected to remain well above that level for the next 20 years. (See Table 8)

In Iowa, the prevalence of single-hospital rural counties and rural counties without hospitals demonstrates the issue of potentially-jeopardized accessibility. A county represents approximately a 30 minute travel distance and provides a reasonable measure of geographic access to acute care facilities.

Eight counties in Iowa currently have no acute care facilities and 64 counties, only one facility. Thus in 73 of Iowa's 99 counties, the citizens have access to only one or no acute care facility. If any of these facilities were not available to the citizens of the area, equitable accessibility could not be assured.

The second guideline standard establishes a target hospital occupancy rate of 80 percent. This standard may also be modified for states which are basically rural and are primarily served by small hospital facilities. The determination of a state's eligibility for this exemption is based on the following standard:

> "In rural areas with significant numbers of small (fewer than 4000 admissions per year) hospitals, an average occupancy rate of less than 80 percent may be justified." (19)

As can be seen in Table 19, 96 of the state's 131 non-federal short-stay hospitals had fewer than 4000 Admissions in 1978. Thus 74 percent of the hospitals in the state are small, rural facilities. If 74 percent can be considered a "significant number," then Iowa clearly qualifies for this exemption.

TABLE 19

IOWA SHORT TERM HOSPITAL ADMISSIONS, 1978

COUNTY/ HOSPITAL	ANNUAL ADMISSIONS
Adair	
Adair Co. Memorial	1126
Adams	
Rosary	1389
Allamakee	
Community Memorial	405
Veteran's Memorial	1219
Appanoose	
St. Joseph Mercy	2887
Audubon	
Audubon Co. Memorial	616
Benton	
Virginia Gay	1377
Black Hawk	
Allen Memorial	10,244
Sartori Memorial	4055
St. Francis	9724
Schoitz Memorial	12,435
Boone	
Boone Co.	3874
Bremer	
Community Memorial	647
Waverly Municipal	1765
Buchanan	
Peoples Memorial	2671
Buena Vista	
Alta Memorial	214
Buena Vista Co.	3216
Calhoun	
Stewart Memorial	2240
Carroll	
St. Anthony Regional	3936
Manning General	614
Cass	
Cass Co. Memorial	4494
Cerro Gordo	
North Iowa Med Center	2473
St. Joseph Mercy	13,741
Cherokee	
Sioux Valley Memorial	3097
Chickasaw	
St. Joseph Community	1676
Clarke	
Clarke Co. Public	1440
Clay	
Spencer Municipal	4110
Clayton	
Central Community	332
Guttenberg Municipal	892
Clinton	
Jane Lamb Memorial	4974
St. Joseph Mercy	6007
DeWitt Community	949
Crawford	
Crawford Co. Memorial	3418
Dallas	
Dallas Co.	1835
Davis	
Davis Co.	3262
Decatur	
Decatur Co.	2562
Delaware	
Delaware Co. Memorial	2309
Des Moines	
Burlington Med.	11,492
Dickinson	
Dickinson Co. Mem.	2054
Dubuque	
Finley	6895
Mercy Health Ctr.	15,514
Mercy-St. Mary's	3970
Xavier	
Emmet	
Holy Family	2026
Fayette	
Mercy	2088
Palmer Memorial	1205
Floyd	
Floyd Co. Memorial	2770
Franklin	
Franklin General	1216
Fremont	
Grape Community	2750
Greene	
Greene Co. Med. Cntr	2225
Grundy	
Grundy Co. Memorial	416
Guthrie	
Guthrie Co.	886
Hamilton	
Hamilton Co. Public	2444
Hancock	
Hancock Co. Memorial	1097
Hardin	
Eldora Community	678
Ellsworth Municipal	1604
Harrison	
Community Memorial	1656
Henry	
Henry Co. Memorial	1840
Howard	
Howard Co.	1326
Humboldt	
Humboldt Co. Memorial	1882
Ida	
Horn Memorial	1145
Iowa	
Marengo	1332
Jackson	
Jackson Co. Public	3084
Jasper	
Mary Frances Skiff Mem.	3483
Jefferson	
Jefferson Co.	2235
Johnson	
Mercy	11,056
University of Iowa	38,520
Jones	
Anamosa Community	1034
John McDonald	783
Keokuk	
Keokuk Co.	962
Kossuth	
Kossuth Co.	1240
Lee	
Ft. Madison Community	3985
Keokuk Area	5459
Linn	
Mercy	15,569
St. Luke's Methodist	19,692
Lucas	
Lucas Co. Memorial	2052
Lyon	
Merrill Pioneer Community	450
Madison	
Madison Co. Memorial	1239
Mahaska	
Mahaska Co.	2956
Marion	
Collins Memorial	2128
Pella Community	1762
Marshall	
Marshalltown Area	8225

The national guidelines provide for exemptions and modifications but do not specify the method to be used by states and HSAs for adjusting the standards. What follows is an attempt to adjust the national guidelines to provide targets that are appropriate for Iowa's population needs:

- Adjustment of the Guidelines -

The questions to be answered are (1) "what hospital occupancy rate in Iowa would be equivalent to the national target average of 80 percent?" and (2) "what number of beds per thousand persons in Iowa would be equivalent to the goal of four beds per thousand persons nationally?"

To adjust the 80 percent hospital occupancy goals to reflect the rural nature of the hospital system in Iowa, special consideration must be given to the distribution of small hospitals in Iowa. Table 20 shows the heavier impact in Iowa of hospitals with fewer than 100 beds.

TABLE 20

NON-FEDERAL SHORT-STAY GENERAL HOSPITALS BY SIZE
FOR IOWA AND THE U.S., 1977

Hospital Bed Size	% of Hospitals		% of Beds	
	Iowa	U.S.	Iowa	U.S.
6-24	2.3	4.7	0.3	0.6
25-49	31.3	18.6	9.0	4.1
50-99	32.1	24.1	18.8	10.7
100-199	16.0	23.5	16.8	20.2
200-299	7.6	11.9	14.0	17.7
300-399	4.6	6.4	11.8	13.2
400-499	2.3	4.1	8.6	11.1
500+	3.8	5.2	20.8	22.0

SOURCE: Compiled from Hospital Statistics, 1978, (American Hospital Association) by Office for Health Planning and Development, Iowa State Department of Health.

The method used in this plan for hospital-size-adjusting the national 80 percent target rate is to identify the presumed target rates for each hospital size group. In 1977, the actual occupancy rate for all hospitals in the U.S. was 73.6 percent. The actual rates for each size group appear in Table 21. Since the average rate of 73.6 percent is lower than the national goal, then it is assumed that the target rates for each size group will be comparably higher than their current actual rates. Thus, this table tells us what the target occupancy rates will be for each hospital size group.

TABLE 21

HOSPITAL OCCUPANCY RATES, BY BED SIZE, U.S., 1977

Size Group	1977 U.S. Hospital Occupancy Rate	Relative Weight Using Average = 1.00*	Estimated Occupancy Rate Targets**
Average Overall	73.6	1.00	80.0
6-24	45.6	.62	49.6
25-49	53.4	.73	58.1
50-99	62.7	.85	68.2
100-199	69.3	.94	75.4
200-299	76.0	1.03	82.6
300-399	77.0	1.06	84.6
400-499	79.6	1.08	86.5
500+	80.1	1.09	87.0

* The rate for each size group is divided by 73.6 to determine the relative weight which that group has upon the average rate.

** To estimate the occupancy rate target for each hospital size group, multiply the relative weights times 80. This assumes that the relationship between the occupancy rates of various size groups remains constant.

SOURCE: Hospital Statistics, 1978, American Hospital Association.

In order to project a target occupancy rate for Iowa, the target rates for the specific hospital size groups are applied to the number of beds in Iowa hospitals within those size groups. Table 22 shows the application of those specific goals to the development of an average goal for the State.

TABLE 22

U.S. OCCUPANCY RATE GOALS AND IOWA TARGET RATE

Bed Size	1979 U. of Usable Beds in Iowa Hospitals	Estimated Occupancy Rate Targets	Target No. of Occupied Beds in Iowa Hospitals
6-24	115	49.6%	57
25-49	1,673	58.1%	972
50-99	2,421	68.2%	1,651
100-199	2,571	75.4%	1,939
200-299	2,701	82.6%	2,231
300-399	1,312	84.6%	1,110
400-499	1,721	86.5%	1,489
500+	3,427	87.0%	2,982
Total	15,941	Divided into	12,431 = 78.0%

Compiled by: Office for Health Planning and Development, Iowa State Department of Health.

Thus, through this adjustment method the national goal of 80 percent has been transformed into the Iowa equivalent goal of 78 percent.

This goal of 78 percent for hospital occupancy when combined with the utilization rate goal for Iowa of 1248 (determined earlier) yield the goal for the number of hospital beds in Iowa that will be equivalent to the U.S. goal of 4 beds per 1000 persons.

For every 1000 persons in Iowa, it is projected, in the goals, that an average of 1248 days will be spent per year in inpatient acute care. Thus, on any day there will be 3.42 persons out of every 1000 projected, in these goals, to need inpatient care (1248 ÷ 365 days = 3.42).

If the hospital occupancy rate goal was 100 percent, then only 3.42 beds would be needed to accommodate the number of persons projected to be in need of inpatient care per 1000 persons. For all of the reasons previously mentioned, hospitals should be expected to have an occupancy rate that allows for seasonal peaks and normal fluctuations. The national guideline target, as adjusted for Iowa, would be 78 percent. Therefore in order to accommodate those 3.42 persons, the guideline goals would call for 4.4 beds per 1000 persons in Iowa (3.42 ÷ 78 = 4.4).

As the result of these adjustments, the national guideline goals of 4 beds per 1000 persons, occupied at an average rate of 80 percent, provide Iowa with an equivalent goal of 4.4 beds per 1000 persons, occupied at an average rate of 78 percent. Table 23 compares the actual 1979 Iowa experience with the adjusted guideline targets.

TABLE 23

COMPARING IOWA EXPERIENCE TO ADJUSTED NATIONAL GUIDELINES

	Iowa-Adjusted National Guideline Goals or Targets	1978 Iowa Actual Rates	Percentage Difference
Patient-Days/ 1,000 Persons	1,248	1,268	1.6%
Average Hospital Occupancy Rate	78.0%	63%	23.6%
Usable Beds per 1,000 Persons	4.4	5.5	20.0%
Number of Current Usable Beds		15,941	
Targeted Beds Projected for 1986	13,245		16.9%

SOURCE: Annual Report of Hospitals, Iowa State Department of Health.

In order to gradually reduce unnecessary bed capacity in Iowa's hospitals, a Certificate-of-Need standard was developed by the SHCC and filed in the Iowa Administrative Rules in February, 1980. This standard projects facility-specific future bed needs and directs that those projected bed needs be used as a basis upon which to approve hospital remodeling, renovation, construction and replacement. Thus, as older facilities apply to remodel or rebuild, the unnecessary beds may be trimmed from the system.

The bed need standard establishes a trade market for each hospital through triennial patient-origin surveying. Within the trade markets, population is projected ten years into the future and an anticipated number of inpatient days is projected for the trade market population.

In projecting the number of inpatient days in the future, the standard does not assume that utilization patterns will remain as high as they are now. Instead the standard establishes a normative rate for each county, for specific age groups, that will bring the higher rate counties down to the current state average rate within the ten year projection horizen.

Hospitals are then assumed to have improved their occupancy patterns, through more effective scheduling. They can then eliminate as many of the unoccupied beds as would be safely possible. Table 24 compares the occupancy rates built into the Iowa Standard with the adjusted guideline goals. The Iowa Standard places greater expectations for change on the smaller hospitals, and the state average rate is projected to be slightly less than the adjusted guideline target for Iowa.

TABLE 24

COMPARING IOWA BED NEED OCCUPANCY STANDARD WITH ADJUSTED NATIONAL GUIDELINE TARGETS

Hospital Bed Size	Iowa Bed Need Standard	Adjusted National Guideline Targets	1978 Iowa Actual
6-24	60%	50%	37%
25-49	60%	58%	46%
50-99	61-70%	68%	54%
100-199	71-80%	75%	58%
200-299	81-83%	83%	68%
300-399	83%	85%	64%
400-499	83%	87%	71%
500+	83%	87%	75%
State Average	75% weighted average	78%	63%

SOURCE: Annual Report of Hospitals, Iowa State Department of Health.

Table 25 compares the hospital utilization rates that would result from an application of the Iowa Standard to the rates in the adjusted guideline targets. The Iowa Standard places greater expectations on reducing inpatient usage among persons over the age of 45. This group will constitute a large portion of Iowa's future population and thus the Iowa Standard rate is projected to be lower than the adjusted guideline target for Iowa.

TABLE 25

COMPARING IOWA HOSPITAL UTILIZATION RATES TO RATES IMPLIED IN THE NATIONAL GUIDELINES

Age Group	1987 Iowa Bed Need Standard*	1986 Adjusted National Guideline Targets
0-14	299/1000	291/1000
15-44	857/1000	801/1000
45-64	1488/1000	1594/1000
65+	3566/1000	3925/1000
State Average	1207/1000**	1248/1000

* These rates are the state average rates obtained from the last triennial patient origin survey. These rates will serve as the norms in the standard until replaced by data derived from the 1980 survey.

** This is a weighted average, after applying the norms to all counties that exceeded the norm levels in 1977.

SOURCE: Compiled by Office for Health Planning and Development, Iowa State Health Department.

The effect of Iowa's standard is to project a bed need of 4.4 beds per 1000 persons (1207 ÷ 365 = 3.307 ÷ 75% = 4.4). The adjusted national guideline for Iowa is also 4.4 beds per 1000 persons (1248 ÷ 365 = 3.419 ÷ 78% = 4.4). Iowa's standard is, therefore, in conformity with the adjusted National Guidelines.

GOAL 3: ELIMINATION OF UNNECESSARY INPATIENT BED CAPACITY.

Objective 1: By 1985, the State will be in compliance with the Adjusted National Guideline goal of an average of 4.4 inpatient beds for every 1000 persons.

SRRA 1: By 1981, the Health Facilities Council will begin applying the Acute Care Bed Needs Standard, adopted by the SHCC, to all applicants seeking a Certificate-of-Need to remodel, reconstruct or renovate hospital inpatient bed capacity or to increase the facility's capacity while unnecessary beds exist.

LRRA 1: By 1985, the Department will work with the Iowa Hospital Association and the University of Iowa Health Center to develop a plan for consolidation and regionalization of Iowa's hospitals.

Making the System Less Costly

Hospital care spending has grown over 260 percent in the past 10 years, an annual average of 14 percent per year. Since hospital costs represent about 40 percent of total health care spending, this fact becomes important to consumers.

In the year ending in December 1978, hospital room charges grew at a rate of 3.3 percentage points greater than the growth of the Consumer Price Index (CPI). In the year ending in September 1979, the spread had narrowed as the CPI continued to climb, while hospital room charges increased only slightly (from an annual rate of 11.0 percent in December 1978 compared to 11.9 percent in September, 1979). (20) By September, 1979, hospital room charges grew by an annual rate 1.6 percentage points above the CPI.

The Health Care Financing Administration (HCFA) has found the CPI to be an inappropriate measure against which to compare institutional experience because it is not designed to reflect factor price changes that are faced by hospitals. Rather, the "market basket" of goods and services that are surveyed each month reflect the purchase preferences of a sampling of average private consumers. Because of this difference, HCFA developed a new indexing method which could be used to "isolate the effects of prices of goods and services required to produce hospital care and measures the average percent change in prices for a fixed market basket of hospital inputs." (21) With this measure, known as the National Hospital Input Price Index, the amount of growth in the medical care component of the CPI can be attributed to inflationary factor costs as isolated from other reasons for increased charges. These other reasons would include "increases in ancillary services, changes in the quality of care provided, changes in overall operating efficiency, changes in case mix, (and) increases in utilization." (22)

These factors are grouped together under the term "intensity". Thus, changes in expenses per patient-day are attributable to changes in factor costs and changes in intensity. Changes in intensity, includes changes in the rate of utilization, and thus includes a factor for the changes in population. In Iowa, of course, the population growth is expected to be minimal.

In recent years changes in intensity have accounted for less and less of the annual growth in expenses per patient. From 1974 to 1976, when the intensity level was at a peak, hospital costs per capita in the United States rose nearly eight percentage points faster than the CPI. This difference was identified in a study by McKinsey and Company, Inc. (23) as attributable to:

1.6% to hospital wage increases above cost of living
1.7% to more labor per patient-day equivalent
4.4% to real non-labor cost increase per patient-day equivalent
.1% to more patient-day equivalents per capita
7.8%

One researcher refers to this as "creeping intensity" (24) such as "doing more tests and other ancillary activity per patient day."

HFCA economist Robert Gibson reported that "65 percent of the 1978 increase (in hospital expenditures) is due purely to inflation. Another 6 percent of the increase is related to population growth, and the remaining 29 percent is the result of increased intensity; greater use and/or changes in the kind and amounts of services provided."

"This intensity increase is reflected in a number of ways. First, the number of inpatient days has increased 8 percent since 1970. Because the average number of days per stay has declined, it also appears that more resources per day are being utilized. For example, the number of hospital laboratory tests nearly doubled in six years, growing from 2.2 billion in 1972 to over four billion in 1977. In addition, surgical operations, which generally require more resources than medical stays, grew nearly 18 percent in that same six year period. The number of outpatient visits also increased dramatically in this same period--22 percent." (25)

Freeland (26) found that the annual rate of increase in service intensity varied considerably in recent years. "The long-term average (1970-78) is 3.5 percent per admission and 4.5 percent per inpatient day. The average, however, is directly influenced by governmental and industry policies. The deceleration in the rate of increase during the period 1970 through 1972 may reflect a combination of secular declines associated with the post-medicare era and the early impacts of the Economic Stabilization Program (ESP) which began in August 1971. Phase IV of ESP (1973-74) appears to have significantly reduced the rate of net service intensity (reducing the net service intensity per adimission in 1974 to 0.7 percent and net service intensity per patient-day to 1.9 percent). Following the lifting of controls hospitals were able to recapture in the following three years all of the foregone net service intensity."

"In April 1977 the Carter Administration announced a program to contain hospital costs and the hospital industry responded with the Voluntary Effort to control costs. Data from 1978 shows that the rate of real growth is again below the long-term average, perhaps due to the threat of mandatory controls."

In Iowa, the Voluntary Effort is in its second year of operation. The industry effort has not yet developed a data base or begun to show evidence of the achievement of a goal of cost containment. Disagreement on the magnitude and type of goals to be achieved has thus far limited the discussions nationally and in Iowa to procedure and not substance. If the Iowa Voluntary Cost Containment Council were able to achieve a reduction in the level of service intensity in Iowa's hospitals comparable to the national experience in 1973-74 (during phase IV of ESP), then the increases in charges at Iowa hospitals would reimburse the facilities for increases in their factor costs, but no more than that amount necessary to cover their increasing costs.

If desired technological improvements are offset by reductions in utilization or by reduction in unnecessary tests or other service intensity factors then they would not contribute to the pressures of increase charges. Thus, the following goal is established.

GOAL 4: THE PORTION OF AN IOWA CONSUMER'S DOLLAR SPENT FOR ACUTE CARE SERVICES WILL REMAIN CONSTANT.

Objective 1: By 1986, the annual rate of hospital charge increases in Iowa be no more than the annual change in the National Hospital Input Price Index. (This objective will be measured as the rate of change in adjusted expenses per patient admission compared to the rate of change in the NHIPI)

SRRA 1: By 1981, the Department will evaluate the compliance of the Iowa Voluntary Cost Containment Council's efforts to achieve this objective.

LRRA 1: By 1983, the Department will investigate the feasibility of prospective rate setting for all medical costs, in the event that this objective has not been met through peer control.

LRRA 1a: By 1986, the Department will analyze the potential for hospital rate review, in the event that other measures do not achieve this objective.

Making the System More Responsive to Consumer Needs

Iowa laws provide that "any resident of a county in this state who is sick or injured shall be entitled to care and treatment in any public hospital established and maintained by that county ..."(27) Additionally, Medicare and Medicaid provide public support for Iowa's elderly and indigent.

During 1977, about 40 percent of Iowa hospital consumers expected their bill to be covered by a government program. The percentage varied among hospitals with a high of 76.1% and a low 22.8%. (28)

Are these programs providing care for all who need it? Probably not. The programs are providing care for all who seek care, but undiagnosed or diagnosed and untreated conditions do exist. A way to identify this hidden need is to go beyond the data which is system-based to a survey of the population. Such a survey has been planned, and the results will be analyzed in future state health plans.

Patient education and health education for consumers are important means for changing consumer perceptions of their medical needs. Consumers who are better aware of good nutritional habits, for instance may reduce the need for later medical intervention. Consumers can also learn how to assist medical professionals in their own treatment. Additionally, consumers can learn how to obtain their medical records and how to evaluate the charges for services.

Hospitals provide some health education to consumers, however historical policies of third-party payors have not adequately reimbursed for such practices. Blue Cross/Blue Shield has a new health screening program available to their employer groups as a step in the direction of changing these historical policies.

The system will be more responsive to consumer needs when health education is given greater emphasis. (Also see Chapter 3)

Making the system more responsive to consumers' needs also involves the aggregate decision-making for availability of service and cost of service. In this regard consumers-of-medical-care are represented by the majority of the boards of all health systems agencies in Iowa and the Statewide Health Coordinating Council. The consumers are generally less well represented on major rate-influencing bodies, such as the boards at Blue Cross/Blue Shield and other commercial health insurance carriers In fact, state law discourages such majority input:

"514.4 directors, at least a majority of the directors of a hospital service corporation must be at all times administrators, or directors, or trustees, or members of the Clinical Staff of hospitals which have contracted or ay contract with such corporation to render to its subscribers hospital service."

"At least a majority of the directors of a medical service corporation must be at all times physicians or surgeons, dentists, podiatrists, osteopathic physicians, or osteopathic physicians and surgeons, who have contracted or may contract with such corporation to render to its subscribers medical or surgical services." (29)

The subscriber-consumer has been represented by a minority influence on the boards of these bodies. Perhaps a majority control in the hands of representatives of those who pay the premiums, major employers and major labor representatives, will bring about stronger efforts to curtial growing health care costs.

GOAL 5: CONSUMERS SHOULD BE INVOLVED IN THE DECISION-MAKING REGARDING THEIR OWN MEDICAL CARE.

Objective 1: By 1985, consumers will be better educated and prepared to make informed decisions regarding their own treatment.

LRRA 1: By 1983, the Department will work with interested health consumer groups to draft legislation identifying the rights and responsibilities of consumers and providers of health care.

Objective 2: By 1985, all non-profit hospital and medical service corporations (under IAC Chapter 514) authorized to provide hospital, medical, pharmaceutical or optometric service contracts in Iowa will have a majority of consumers on their boards of directors.

LRRA 2: By 1983, the Department will draft legislation changing Ch. 514.4, Code of Iowa (1979) to require majority membership by consumers on the boards of non-profit hospital and medical service corporations.

IOWA'S PRIORITY HEALTH PROBLEMS AFFECTED BY ACUTE CARE SERVICES

- Accidents -

Accident victims are generally introduced into the acute care system through emergency room treatment. The capacity of various hospital emergency rooms is dependent upon the availability of round-the-clock staff and support services. Most Iowans live within 45 minutes of a community emergency facility and within 75 minutes of a regional emergency facility, however, some Iowans still must travel far for such service. (For more information see the Emergency Medical Services Plan.)

Hospitals in Iowa provide a setting for the treatment of more accident victims than do hospitals in most other states. In 1977, the consumer-discharge-rate per 1,000 residents from Iowa hospitals for accident victims was nearly 22 percent greater than the national rate for the same conditions. Additionally, Iowa accident victims spend nearly a day longer in the hospital than the national average for the same condition. (30)

Work-related injuries and illnesses in Iowa during that time occurred at a rate almost identical to the national rate, and no explantaion seem apparent for justifying the substantially higher hospital use rate for accident victims in

Iowa. Further research needs to be done in this area before specific actions can be recommended. Currently a new EMS plan is being developed. It's conclusions will be incorporated into future SHPs.

GOAL 6: ACCIDENT VICTIMS SHOULD BE TREATED IN THE MOST EFFECTIVE/LEAST COSTLY MEANS POSSIBLE.

Objective 1: By 1985, the rate of in-patient acute care for accident victims in Iowa be no more than the U.S. rate for that condition.

LRRA 1: By 1983, the Department will have analyzed the type of treatment provided to accident victims in acute care facilities to determine what less-costly alternative modes could provide the same quality of care.

LRRA 1a: By 1983, the Department will work with other agencies to identify those conditions that result in in-patient acute care for accidents and will draft a plan for reducing the probability and severity of those accidents. (See Preventive Services Chapter).

- Cancer -

Acute care hospitalizations in Iowa for Cancer victims was below the national rate in 1977 and Iowa Cancer victims spent fewer days in in-patient facilities. (31) For every 10,000 residents in Iowa 80.6 consumers were discharged from hospitals after treatment for malignant neoplasms. The national rate was 81.4 per 10,000 in 1977. In Iowa those consumers had an average length of stay of 11.9 days, while the national length of stay was 12.2 days. Iowa has similarly lower rates and lengths of stay for consumers diagnosed with benign or unspecified neoplasms.

This effort in Iowa is more remarkable when considered in view of Iowa's population mix. The incidence of Cancer is generally greater among the elderly. That group makes up a larger portion of Iowa's population than nationally.

The Iowa rates and lengths of stay for Cancer victims are encouraging, and current progress should be maintained. No additional recommendations seem necessary.

CONSIDERATION OF THE NATIONAL GUIDELINES FOR RADIATION THERAPY

Radiation therapy refers to that branch of radiology which deals with therapeutic application of radiation, including roentgen rays (X-rays), radium or equivalent sources, radionuclides, and other forms of particulate radiation. Therapeutic X-rays are used more frequently for treatment of cancer than radium therapy or therapy involving radionuclides. Advances in the methods of applying X-rays to malignant neoplasms have resulted in more effective management of the uncontrolled growth of cancer cells.

The National Health Planning Guidelines set out the following standards for radiation therapy services:

1) A megavoltage radiation therapy unit should serve a population of at least 150,000 persons and treat at least 300 cancer cases annually, within three years after initiation.

2) There should be no additional megavoltage units opened unless each existing megavoltage unit in the health service area(s) is performing at least 6,000 treatments per year.

2) Adjustments downward may be justified when travel time to an alternate unit is a serious hardship due to geographic remoteness, based on analyses by the HSA.

In Iowa, there are currently 19 megavoltage radiation therapy units located at 13 facilities. In 1978, five facilities met both of the numerical standards. Seven facilities were below the standards and one facility had acquired their unit within the past three years. The population standard for the state appears to be within the guidelines (2,800,000 ÷ 18 = 155,556), however it is doubtful that all units served a population base of 150,000. Table 26 displays the statistics on megavoltage therapy units in Iowa.

TABLE 26

MEGAVOLTAGE RADIATION THERAPY UNITS IN IOWA

Location/ Facility	Linear Accelerators No. & Size	Cobalt Unit No.	No. of Patients Treated			No. of Treatments			Date Service Offered	
			1977	1978	Jan-Jun 1979	1977	1978	Jan-Jun 1979	Linear Accelerators	Cobalt
Ames - Mary Greeley		1	169	298	132	2,485	2,231	986		76
Burlington - Burlington Med.	1(4MEV)		---	47	47	---	186	519	78	
Cedar Rapids - Mercy	1(4MEV)	1	390	381	166	11,205	7,113	3,628	73	56
Clinton - Jane Lamb		1	72	445	262	2,057	1,572	986		70
Council Bluffs Jennie Edmundson	1(?)		247	NA	NA	3,072	3,341	NA	?	
Creston - Greater		1	144	51	20	1,014	392	119		69
Des Moines - Methodist	1(4MEV)	1	630	NA	454	13,214	15,879	8,572	71	62
Dubuque - Finley	1(4MEV)		NA	546	276	10,397	5,304	2,664	75	
Iowa City U. of Iowa	2(4MEV) (18MEV)	1	800	NA	NA	16,990	15,457	8,223	76, 77	57
Mason City - St. Jos. Mercy	1(4MEV)		165	133	69	2,261	2,258	1,226	75	
Ottumwa - Ottumwa		1	87	101	57	1,386	950	504		75
Sioux City - Marian	2(4MEV) (12MEV)	1	NA	797	411	7,547	8,118	3,402	72, 73	64
Waterloo - Schoitz	1(4MEV)		NA	NA	NA	5,709	5,574	2,557	74	
TOTAL	11	8								

SOURCE: Special Survey - Radiation Therapy, Iowa State Department of Health.

In February, 1980 the Department filed notice of proposed rulemaking to establish in the Iowa Administrative Code the Certificate-of-Need standards for megavoltage radiation therapy units. These standards specify the following minimum utilization levels:

Unit Size	Service population	expected annual number of patients
low energy (4-10 MEV)	200,000	300
medium energy (12-20)	200,000	500
high energy (20+)	200,000	750

In addition, no new units should be approved unless each existing unit of similar size within 90 minutes travel time is performing at least 6,000 treatments annually. These standards are in compliance with, and in some instances exceed the goals of the National Guidelines.

- Heart Disease -

The rate of hospitalizations for hypertension in Iowa is comparable to the national level, but the Iowa rate for acute myocardial infarctions (heart attacks) and cerebrovasuclar accidents (strokes) is substantially greater. (32)

The Iowa rate of hospitalizations is about 27 percent greater than the national level for heart attacks and 36 percent greater for strokes. This experience is partially explainable by the increased portion of elderly in the Iowa population. The differences are substantial and will increase as the elderly population grow as a percentage of the hospital consumer census.

Additional study is necessary to determine what prevention and detection measures would help reduce these high numbers. (For further information see the recommendations in Chapter Three).

CONSIDERATION OF THE NATIONAL GUIDELINES FOR CARDIOVASCULAR SURGERY

Cardiac surgery are those services associated with, and surgery performed for congenital or acquired heart disease, great vessels, or pericardium, including the placement of tranveous and epecardial pacemeakers. Open heart surgery is cardiovascular surgery in which an incision of sufficeint size allows direct vision of the area, and which requires the temporary use of a heart lung machine.

It should be noted that capacity figures for adult and pediatric open heart surgery are dependent upon the availability of qualified staff and appropriate equipment and physical plant capacity. To the extent that these elements are present in a hospital offering both adult and pediatric open heart surgery services, estimates of capacity will tend to be related and may be somewhat artificial.

Research of the literature indicates that there is a direct relationship between the number of cardiac catheterizations performed and the number of cardiac surgical procedures performed. Utilization of cardiac surgery indicates that cardiovascular surgeons and cardiologists anticipate that between 20 percent and 50 percent of those who receive catheterizations could benefit from cardiac surgery. This range is affected by factors such as referral patterns and the length of time that services have been available at a given hospital. If a backlog of referrals to a new (not previously existing) cardiac surgical service develops, the "waiting list" effect of this backlog on the 20 percent to 50 percent range cited above will cause the number of catheterization patients receiving surgery to be closer to 50 percent when surgical services first become available in the new setting. Experience in Iowa hospitals indicates that, over time, this percentage will average 35 percent - 50 percent.

The National Health Planning Guidelines set out the following minimum standards for adult and pediatric open heart surgery services:

1) There should be a minimum of 200 open heart procedures performed annually, within three years after initiation, in any institution in which open heart surgery is performed for adults.

2) There should be a minimum of 100 pediatric heart operations annually, within three years after initiation, in any institution in which pediatric open heart surgery is performed, of which at least 75 should be open heart surgery.

3) There should be no additional open heart units initiated unless each existing unit in the health service area(s) is operating and is expected to continue to operate at a minimum of 350 open heart surgery cases per year in adult services or 130 pediatric open heart cases in pediatric services.

From Tables 27 and 28 it should be noted that two of the three adult open heart surgery units that have been operating for three years meet the standards for a minimum of 200 adult procedures. Only one of the two pediatric units (both have been operating for at least three years) met the standard of 100 procedures with 75 specifically being open heart (pump-assisted) procedures.

TABLE 27

ADULT OPEN HEART SURGERY UNITS IN IOWA

Location/ Facility	No. of Surgeries Performed			Date Service Offered
	1977	1978	Jan.-June 1979	
Cedar Rapids				
St. Luke's	0	25	43	6/78
Des Moines				
Des Moines General	0	2	21	12/78
Mercy	511	476	191	8/71
Methodist	0	78	92	6/78
Dubuque				
Mercy	148	163	78	10/76
Iowa City				
U. of Iowa	492	525	303	1/58
Sioux City				
Marian	0	53	59	5/78
Davenport				
St. Luke's	0	0	NA	10/79

* Estimated

SOURCE: Special Survey: Open Heart Surgery, Iowa State Department of Health.

TABLE 28

PEDIATRIC OPEN HEART SURGERY UNITS IN IOWA

Location/ Facility	No. of Surgeries Performed 1977	1978	Jan.-June 1979	Date Service Offered
Des Moines Mercy	24	24	20	8/71
Iowa City University of Iowa	105	103	42	6/56

SOURCE: Special Survey: Open Heart Surgery, Iowa State Department of Health.

In February, 1980 the Department filed notice of proposed rulemaking to establish in the Iowa Administrative Code the Certificate-of-Need standards for cardiovascular surgery programs. These standards specify the same minimum projected utilization levels as listed in the National Guidelines.

CONSIDERATION OF NATIONAL GUIDELINES FOR CARDIAC CATHETERIZATION

Intracardiac catheterization is a diagnostic study of the heart, and/or pulmonary arteries, in which a small catheter pases through a vein or artery in the neck or arm and advances into the great vessels, the heart or pulmonary arteries. Coronary artery catheterization is a diagnostic study of the coronary arteries in which a small catheter passes through an artery in the neck, leg or arm, into a coronary artery orifice.

The National Health Planning Guidelines set out the following minimum standards for cardiac catheterization services:

1) There should be a minimum of 300 cardiac catheterizations, of which at least 200 should be intracardiac or coronary artery catheterizations, performed annually in any adult cardiac catheterization unit within three years after initiation.

2) There should be a minimum of 150 pediatric cardiac catheterizations performed annually in any unit performing cediactic cardiac catheterizations within three years after initiation.

3) There should be no new cardiac catheterization unit opened in any facility not performing open heart surgery.

4) There should be no additional adult cardiac catheterization units opened unless the number of studies per year in each existing unit in the health service area(s) is greater than 500 and no additional pediatric unit opened unless the number of studies per year in each existing unit is greater than 250.

Tables 29 and 30 summarize data on the number of adult and pediatric cardiac catheterization laboratories, the number of adults and pediatric cardiac catheterizations performed during calendar year 1977, 1978 and the first half of 1979; when these services were first offered; and which hospitals offering cardiac catheterization services also perform open heart surgery. Of the 12 hospitals offering cardiac catheterization, eight perform open heart surgery also.

See Tables 29 and 30 on the next page.

As the previous table indicated, of the nine hospitals that have offered adult cardiac catheterization services for at least three years, only one non-federal hospital failed to meet the standard of 300 procedures by 1978. The state's only separately-designated pediatric catheterization lab, at University of Iowa, did perform more than 150 procedures by 1978. Only four of the adult units performed more than 500 procedures and the one separate pediatric unit did perform 250 procedures by 1978.

Four of the facilities were not also performing open heart surgery.

In February, 1980, the Department filed notice of proposed rulemaking to establish in The Iowa Administrative Code the Certificate-of-Need standards for cardiac catheterization. These standards specify the same minimum utilization levels as National Guidelines 1, 2 and 3. The Iowa Standard for expansion of services deviates from the National Guideline by specifying that no new pediatric catheterization units be approved until all current providers within a three hour travel distance are operating at a minimum level of 150 studies per year. All other standards are identical to those in the National Guidelines.

- Mental Disorders -

Acute care community hospitalizations in Iowa for mental disorders occur at about the same rate as the national average. Iowa hospital consumers however,

TABLE 29

ADULT CARDIAC CATHETERIZATION SERVICES IN IOWA

Location/Facility	Cardiac Catheterization Labs	No. of Catheterizations Jan/Dec 1977	Jan/Dec 1978	Jan/Jun 1979	Date Service First Offered	Performing Open Heart Surgery
Cedar Rapids						
St. Luke's Hospital	1	0	339*	334	4/78	Yes
Davenport						
Mercy Hospital	1	396	348	260*	NA	Yes**
Des Moines						
Des Moines General	1	0	50*	82	6/78	Yes
Lutheran Hospital	1	194	388	203	5/74	No
Mercy Hospital	1	666	678	385	1/71	Yes
Methodist Medical Center	1	462	659	390	4/76	Yes
Veteran's Administration	1	187	307	199	8/72	No
Dubuque						
Mercy Health Center	2	335	562	298	10/76	Yes
Iowa City						
University of Iowa[a]	2	592	1,166	716	7/51	Yes
Veteran's Administration	1	220	NA	NA	/68	No
Sioux City						
Marian Health Center	1	237*	224	147	2/77	Yes
Waterloo						
Allen Memorial Hospital	1	0	67*	93	8/78	No

* Service available for less than 1 year or 6 months periods

** After completion of construction it will be relocated at St. Luke's Hospital, which provides open heart surgery.

(a) The magnitude of the increase in the number of procedures performed in 1977 and 1978 is partially due to a change in the definition of "adult intracardiac". The University of Iowa defines right and left heart catheterization as two procedures.

SOURCE: Iowa Department of Health, Office for Health Planning & Development, "Special Survey: Cardiac Catheterization" 1977 and 1979.

TABLE 30

PEDIATRIC CARDIAC CATHETERIZATION SERVICES IN IOWA

Location/Facility	Cardiac Catheterization Labs	No. of Catheterizations			Date Service First Offered	Performing Open Heart Surgery
		Jan/Dec 1977	Jan/Dec 1978	Jan/Jun 1979		
Des Moines						
Mercy Hospital	(a)	112	111	60	1/73	Yes
Methodist Medical Center	(b)	27	39	18	NA	Yes
Des Moines General	(c)	0	0	0	6/78	Yes
Iowa City						
University of Iowa	1	238	271	139	9/63	Yes

(a) Mercy Hospital uses the same cardiac catheterization laboratory for both adult and pediatric catheterizations.
(b) Iowa Methodist does not regularly offer pediatric cardiac catheterization services. Procedures are performed in the adult catheterization lab on an emergency basis and on physician discretion.
(c) Des Moines General uses a radiology special procedures room for all cardiac catheterizations.

SOURCE: Iowa Department of Health, Office for Health Planning & Development, "Special Survey: Cardiac Catheterization" 1977 and 1979.

stay longer in the hospital for such acute conditions. The national average length of stay in 1977 was 10.8 days for mental disorders, but in Iowa the average was 13.3 days during the same year. The rates are for hospitalizations in community acute care facilities and do not include residents at mental health facilities. (33)

Currently a major study is being undertaken to identify the need for mental health services in Iowa. The results of this study will determine the objectives and action steps to be included in future SHPs regarding needs for acute services for mental health problems.

- Substance Abuse -

Acute substance abuse incidents requiring hospitalizations may be a problem in Iowa. Data is not available on which to evaluate the condition because Iowa hospitals generally don't report such incidents to the Iowa Department of Substance Abuse. Such reporting would provide a valuable data base to State Health Planners, however, such reports are not now required by the state law.

The Department of Substance Abuse needs this kind of information in order to properly plan services for Iowans.

GOAL 7: ACUTE CARE SERVICES FOR SUBSTANCE ABUSE VICTIMS BE AVAILABLE IN THE MOST EFFICIENT AND EFFECTIVE MANNER POSSIBLE.

Objective 1: By 1981, the Department of Substance Abuse will have available, hospital-based data on substance abuse incidents.

SRRA 1: By 1981, the Department of Health will supply to the Department of Substance Abuse hospital-based discharge data obtained from studies of Iowa hospital consumers undertaken by the Department and the Iowa Hospital Association.

- Complications of Pregnancy -

Iowa is the home of a unique and nationally acclaimed program. A sophisticated scheme known as the Perinatal Network has enabled small rural hospitals in Iowa to provide perinatal care for low-risk consumers at quality levels comparable to higher volume facilities. A description of the reduce mortality levels brought about by the system appeared in the Journal of the American Medical Association. "In 1973 an extensive education program was developed in Iowa as part of a perinatal regionalization program, which has attempted to improve perinatal care in all hospitals delivering babies and has emphasized screening and early referral of high risk patient." (34)

The reductions in mortality indicators are demonstrated in table 31 and chart 1.

Because the rate of complications of pregnancy in Iowa hospitals is slightly below the national rate, no recommendations for actions appear necessary at this time. (Standards are being developed to address the quality and costs of neonatal services and objectives will become more apparent later.)

CONSIDERATION OF NATIONAL GUIDELINES FOR OBSTETRICAL UNITS

The National Health Planning Guidelines set out the following minimum standards for obstetrical services:

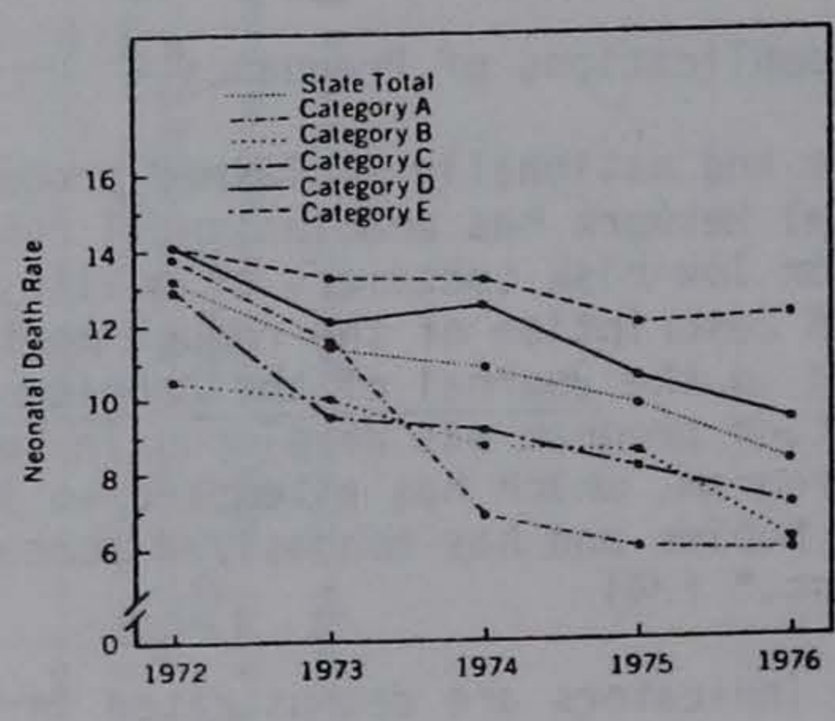
TABLE 31

Live Births and Fetal and Neonatal Death Rates*			
Year	Live Births	Fetal Death Rate, %	Neonatal Death Rate, %
Category A			
1972	2,247	7.51	13.80
1973	2,619	9.08	11.45
1974	2,501	11.07	6.80
1975	2,354	9.28	5.95
1976	2,584	6.57	5.85
Category B			
1972	8,423	9.87	10.56
1973	7,801	10.28	10.00
1974	8,073	9.93	8.67
1975	7,441	7.47	8.47
1976	7,208	6.89	8.11
Category C			
1972	7,881	9.05	12.94
1973	9,004	8.26	9.55
1974	8,814	9.66	9.08
1975	8,698	7.76	8.05
1976	8,098	6.87	7.04
Category D			
1972	13,473	11.30	14.18
1973	11,027	8.81	12.06
1974	12,174	9.60	12.49
1975	11,488	7.43	10.53
1976	11,664	9.34	9.34
Category E			
1972	9,185	11.41	14.15
1973	8,698	10.24	13.22
1974	8,894	12.33	13.15
1975	11,677	10.84	11.90
1976	12,476	9.61	12.26
State Totals, hospital births			
1972	41,209	10.40	13.18
1973	39,149	9.31	11.29
1974	40,456	10.37	10.78
1975	41,658	8.57	9.77
1976	42,008	8.36	9.00

*By hospital category, 1972 to 1976

CHART 1

Neonatal death rates, 1972 to 1976.



1) Obstetrical services should be planned on a regional basis with linkages among all obstetrical services; and linkages among obstetrical services and neonatal services.

2) Hospitals providing care for complicated obstetrical problems (Levels II and III) should have at least 1,500 births annually.

3) There should be an average annual occupancy rate of at least 75 percent in each unit with more than 1,500 biths annually.

Iowa meets the first standard. Iowa has a well-developed perinatal care network. This regional system described above was organized in 1973.

Table 32 shows the nunber of births and the occupancy rate for the hospitals affected by the National Guideline Standards 2 and 3.

Table 32

INSTITUTIONS IN IOWA AFFECTED
BY OBSTETRICAL NATIONAL GUIDELINES

Institution		O.B. Unit Size	1978 Number of Births	1978 Percent Occupancy
Mary Greeley	Ames	22	1,081	56%
Burlington	Burlington	21	879	53
St. Luke's	Cedar Rapids	52	2,165	55
Mercy	Council Bluffs	9	427	50
St. Luke's *	Davenport	33	1,433	50
Methodist	Des Moines	30	1,926	78
Lutheran *	Des Moines	28	1,795	64
Mercy	Dubuque	37	1,162	45
University of Iowa **	Iowa City	36	3,074	124
Mercy	Iowa City	20	1,321	86
St. Joseph	Mason City	15	842	65
Ottumwa	Ottumwa	11	714	65
St. Luke's	Sioux City	36	1,381	50
St. Francis	Waterloo	26	979	73

* This will become a Level II facility in 1980
** Is not a Level II or III facility
*** Level III facility

SOURCE: Iowa Department of Health, Annual Report for Hospitals and Related Health Facilities, 1978 Survey.

Level I hospitals provide services primarily for uncomplicated maternity and newborn cases. Level II hospitals provide services for uncomplicated cases and for the majority of complicated problems, and certain specialized neonatal services. Level III hospitals are able also to handle all the serious types of illnesses and abnormalities.

Only four of the 14 facilities that are designated as either Level II or III meet the standard for the minimum number of births. Of the four facilities that had at least 1,500 births in 1978, two met the standard for minimum occupancy level.

Certificate-of-Need standards for obstetrical units have been adopted by the SHCC and are currently in the process of being filed for rulemaking prior to being added to the Iowa Administrative Code. The key features of these standards include:

1) Minimum occupancy rates ranging from 45 percent to 75 percent depending upon the number of births at the facility;

2) Requirements to consolidate underutilized services in multi-hospital counties; and

3) A committment on the part of the applicant to participate in community planning efforts for obstetrical services.

While these standards do not directly relate to those in the National Guidelines, the intent is to provide the most efficient service to the residents while still assuring accessibility in a state with a dispersed rural population.

CONSIDERATION OF NATIONAL GUIDELINES FOR NEONATAL INTENSIVE CARE SERVICES

Neonatal intensive care units are nurseries for newborns, within their first 4 weeks who are critically ill or of extremely high risk. Neonatal intensive care units are found in all Regional Level II and Level III Perinatal facilities, as well as in some Level I Perinatal Centers which have a very high number of births.

The National Health Planning Guidelines list the following minimum standards for neonatal special care services:

1) Neonatal services should be planned on a regional basis with linkages with obstetrical services.

2) The total number of neonatal intensive and intermediate care beds should not exceed 4 per 1,000 live births per year in a defined neonatal service area. An adjustment upward may be justified when the rate of high-risk pregnancies is unusually high, based on analyses by the HSA.

3) A single neonatal special care unit (Level II or III) should contain a minimum of 15 beds. An adjustment downward may be justified for a Level II unit when travel time to an alternate unit is a serious hardship due to geographic remoteness, based on analyes by the HSA.

This state is in compliance with the first two standards. The facilities providing neonatal special care services are part of the Statewide Perinatal Care Program. The neonatal special care bed per 1,000 live births is less than 4; using the number of live births in 1976, there were 3.4 beds per 1,000 births. However, conformity with the 15 bed minimum would be a serious problem. Only the Level III facility and two Level II facilities meet this standard, as can be seen in Table 33.

Table 33

NEONATAL SPECIAL CARE SERVICES IN IOWA, 1978

Institution	Unit Size	Patient Admissions	Patient Days	Percent Occupancy	Average Length of Stay
y Greeley, Ames	4	263	727	50	2.7
lington, Burlington	3	43	240	22	5.5
Luke's, Cedar Rapids	16	249	3,014	52	12.1
a Methodist, Des Moines	24	437	7,890	90	18.0
cy, Dubuque	7	280	1,465	57	5.2
cy, Iowa City	6	16	196	9	12.2
versity of Iowa, Iowa City *	40	3,729	20,471	140	5.4
Joseph Mercy, Mason City	6	26	140	6	5.3
umwa, Ottumwa	4	NA	279	19	NA
Luke's, Sioux City	13	253	3,494	74	13.8
Francis, Waterloo	10	155	2,943	81	18.9
TOTALS	133	5,451	40,859	84	7.5

evel III Unit

URCE: Iowa Department of Health, Annual Report for Hospitals and Related Health Facilities, 1978 survey.

In February, 1980, the Department filed notice of proposed rulemaking to establish in the Iowa Administrative Code the Certificate-of-Need standards for Neonatal Intensive Care Units. These standards are in conformity with the National Guidelines regarding the four beds per 1,000 live births and 15 bed minimum size units.

CONSIDERATION OF NATIONAL GUIDELINES FOR PEDIATRIC ACUTE CARE

The National Health Planning Guidelines set out the following minimum standards for pediatric services:

1) There should be a minimum of 20 beds in a pediatric unit in urbanized

areas. An adjustment downward may be justified when travel time to an alternate unit exceeds 30 minutes for 10 percent or more of the population, based on analyses by the HSA.

2) Pediatric units should maintain average annual occupancy rates related to the number of pediatric beds in the facility:

Pediatric Beds	Average Annual Occupancy Rate
20 - 39	at least 65%
40 - 79	at least 70%
80 or more	at least 75%

Table 34 shows the unit size and occupancy of pediatric units in hospitals in Iowa that are affected by this standards

Table 34

INSTITUTIONS IN IOWA AFFECTED BY PEDIATRIC NATIONAL GUIDELINES

Institution	Pediatric Unit Bed Size	1978 Percent Occupancy	Guideline Occupancy
Mercy, Cedar Rapids	39	59	65%
St. Luke's, Cedar Rapids	42	59	70
Jennie Edmundson, Council Bluffs	21	45	65
Mercy, Council Bluffs	49	32	70
Mercy, Davenport	20	48	65
Osteopathic, Davenport	22*	45	65
St. Luke's, Davenport	24	57	65
Broadlawns, Des Moines	19	32	65
General, Des Moines	23	50	65
Lutheran, Des Moines	47	55	70
Mercy, Des Moines	37	75	70
Methodist, Des Moines	56	67	70
Finley, Dubuque	15	51	65
Mercy, Dubuque	32	50	65
Xavier, Dubuque	20	28	65
Marian, Sioux City	39	55	65
St. Luke's, Sioux City	52	52	65
Allen, Waterloo	32	35	65
Schoitz, Waterloo	35	38	65
St. Francis, Waterloo	23	63	65

SOURCE: Department of Health, Annual Report for Hospitals and Related Health Facilities, 1978 survey.

* After completion of construction this facility will have 10 pediatric beds

Of the 20 affected hospitals in Iowa, two did not meet the minimum number of beds standard. One facility, Broadlawns, was only one bed below the standard.

In January, 1980, the Department filed notice of proposed rulemaking to establish in the Iowa Administrative Code the Certificate-of-Need Standards for Pediatric

Units. These standards specify no minimum bed size to qualify, but do specify minimum occupancy rates. The rates vary with the size of the unit as follows:

Under 10 beds - 60% occupancy
10 - 19 beds - 60 - 64%
20 - 39 beds - 65 - 69%
40 - 79 beds - 70 - 74%
80 or more beds - 75%

This standard differs from the National Guideline in the allowance for units below the 20 bed minimum and the provision of target occupancy rates for those smaller units. The SHCC decided that smaller pediatric units were justified in the small rural hospitals in Iowa.

- Communicable Diseases -

The inpatient acute care system generally provides a setting for the treatment of meningitis, hepatitus, and pneumonia. The rate of occurances in Iowa of meningitis and hepatitus during 1977 was substantially below the national rates for these two diseases. For hepatitus A, B and Unspecified the State rate was less than half of the national rate. (See Table 35 Below)

TABLE 35

Reported Cases of Selected Communicable Diseases
(1977 Rates per 10,000 in Iowa and U.S.)

	UNDER AGE 40	OVER AGE 40
Hepatitus A, B and unspecified		
Iowa	12.0	4.0
U.S.	30.6	9.3
Meningitis		
Iowa	0.9	—
U.S.	1.1	0.2
	UNDER AGE 45	OVER AGE 45
Pneumonia and Influenza		
Iowa	71.0	654.8
U.S.	116.9	682.3

SOURCES: Compiled from Morbidity Report: Annual Summary, Iowa Department of Health and Reported Morbidity and Mortality in the United States. Center for Disease Control.

No recommendations for actions appear necessary at this time.

The incidence of reported cases of pneumonia and influenza was substantially below the national level for residents under age 45 and was about four percent below the national average for older residents.

CONSIDERATION OF NATIONAL GUIDELINES FOR COMPUTERIZED TOMOGRAPHIC (CT) SCANNERS

Computed tomographic imaging, also known as computerized tomography (CT) and computerized axial tomography is a relatively new diagnostic technique. The first CT scanner was developed by EMI, Ltd., a British corporation, and was introduced in the United States at the Mayo Clinic in 1973. This first scanner was called a "brain scanner", since it was designed to scan the head. "Whole body scanners" have since been introduced.

The National Health Planning Guidelines set out the following minimum standards for CT imaging units:

1) A Computed Tomographic Scanner (head and body) should operate at a minimum of 2,500 medically necessary patient procedures per year, for the second year of its operation and thereafter.

2) There should be no additional scanners approved unless each existing scanner in the health service area is performing at a rate greater than 2,500 medically necessary patient procedures per year.

3) There should be no additional scanners approved unless the operators of the proposed equipment will set in place data collection and utilization review systems.

Table 36 summarizes recent data from Iowa facilities which have either head or whole body scanners. The only hospital-based scanner that had more than two years experience prior to the survey was the head scanner at the University of Iowa Hospitals and Clinics. The University's head scanner was operating at a level above that suggested in the Guidelines.

See Table 36 on the next page.

Location/Facility	Unit[1] Type	Number of Patient Procedures Performed[2] Jan/Dec 1977	Jan/Dec 1978	Jan/Jun 1979	Initial Service Date
Ames					
Mary Greeley	H	---	---	---	1/80
Cedar Rapids					
Mercy Hospital	W	421*	1,405	854	9/77
Council Bluffs					
Jenny Edmundson	H	---	---	---	6/79
Mercy Hospital	W	---	---	---	6/79
Davenport					
Mercy Hospital	H	---	---	---	7/79
Des Moines					
Iowa Lutheran	W	843*	1,361	850	2/77
Iowa Methodist	W	873*	1,544	980	2/77
Mercy Hospital	W	1,458*	1,974	1,171	2/77
Physician's Imaging	W	---	---	---	7/79
Dubuque					
Mercy Health Center	W	1,054*	2,460	1,332	7/77
Iowa City					
University of Iowa	H	3,293[3]	3,459	2,274	11/73
	W		1,521	1,340	4/77
Mason City					
St. Joseph Mercy	W	---	---	405*	3/79
Sioux City					
Dr. W. Eckman	H	---	N/A	N/A	/78
Sioux City Radiological Group PC	W	1,065	1,384	557	12/76
Waterloo					
Schoitz	W	---	---	690	1/79
TOTAL		9,007	15,108	10,453	

- - - Not applicable
N/A Not available
* Procedures performed during period of less than the full year or six months
[1]H - Imaging unit capable of performing brain images exclusively, i.e. "head scans"
W - Imaging unit capable of performing brain images and other computed images, i.e. "whole body scans"
[2]One "patient procedure" is defined as including "during a single visit, the initial scan plus any necessary additional scans of the same anatomical area of diagnostic interest"
[3]Includes procedures for both scanning units

SOURCE: Iowa Department of Health, Office for Health Planning and Development, Special Survey: Computed Tomographic Imaging, 1977 and 1979; and Office for Health Planning & Development, Annual Report for Hospitals and Related Health Facilities, 1977 and 1978 survey.

In June, 1980, the SHCC will consider a major revision of the CT Standard used for Certificate-of-Need approval.

This standard, if adopted and established in the Iowa Administrative Code, will differ markedly from the standards in the National Guidelines. The proposed C.T. Standard will establish an operating capacity target for all scanners in the state, but the target will be measured in terms that allow for the difference in patient mix and complexity of procedure. The methodology was devised by the National Electrical Manufacturers Association (NEMA), a trade organization of the manufacturers of the CT Scanners. The unit of measure is the "HECT". One HECT is the amount of time required to provide one simple head scan procedure on a body scanner, without the use of enhancing contrast media. The HECT time includes the time necessary to prepare the scanner and to clean up the area between patients and was determined by a survey of over 500 facilities in the country. All other scans, more complex in nature, are compared in terms of the time required, expressed as multiples of the HECT.

The target utilization level in the proposed standard is 3,000 HECTs, which would roughly be equivalent to 1900-2100 procedures. No new scanners would then be introduced into a community until all existing scanners are performing at an average level at least 3,000 HECTs.

CONSIDERATION OF NATIONAL GUIDELINES FOR END STAGE RENAL DISEASE (35)

End Stage Renal Disease (ESRD) is defined as that stage of permanent, irreversible kidney damage which cannot be favorably influenced by diet modification and medication alone, which requires dialysis or kidney transplantation to maintain life. Dialysis is a technique by which waste products are removed from the bloodstream either by a mechanical device through which blood is circulated (hemodialysis) or by introducing a solution into the abdominal cavity so that waste products pass across the petrioneal membrane into the solution and flushed out with the solutin (peritoneal dialysis). Both of these types of dialysis can be performed on an institutional basis (center or outpatient maintenance dialysis) and on an in-home basis (home dialysis). Peritoneal dialysis can also be performed on a continuous ambulatory basis.

The Social Security Amendments of 1972 (P.L. 92-603) provided for coverage of persons suffering from ESRD under the Medicare program. This program has substantially increased financial accessibility to costly ESRD services.

The law also established a series of regional network coordinating councils. ESRD Network #8 is located in Des Moines. It is charged with coordinating ESRD services in a geographical area that includes all of the state of Iowa, central and eastern Nebraska and three Illinois counties in the Quad cities area.

The goals of the End-Stage Renal Disease Networks are to:

a. Assist beneficiaries, who have been diagnosed as having end stage renal disease, to receive the care they need;

b. Encourage proper distribution and effective utilization of end stage renal disease treatment resources while maintaining or improving the quality of care;

c. Provide for the efficient delivery of appropriate care by physicians and facilities; and

d. Encourage self-dialysis or transplantation for the maximum practical number of patients who are medically, socially, and psychologically suitable candidates for such treatment.

In 1978, the ESRD Program was amended by P.L. 95-292. The primary intent of this legislation was to increase the number of patients who self-dialyze and the number who receive transplants. The fourth goal of the ESRD Networks, listed above, was added via this legislation. The issue addressed by the legislation was cost containment. One issue noted was that dialysis at home is less expensive than dialysis at a hospital. On the basis of 1975 cost information, DHEW estimated the annual cost of home dialysis to be approximately $9,400 per patient less than outpatient maintenance dialysis. (36) This represented a 50-60% savings. While home dialysis in Iowa is still less expensive than outpatient maintenance dialysis, the saving is not of the magnitude estimated by DHEW. By comparison, the cost of providing home dialysis in Iowa is 27% less than the cost of providing outpatient maintenance dialysis. The annual (1979) per patient costs are an estimated $23,500 and $32,100 respectively.

These estimates should be used cautiously. Like the 50-60% savings, the 27% savings reflect only those costs which Medicare will reimburse. The actual cost of dialysis will always be higher than the reimbursable cost unless or until Medicare reimbursement policies change. Actual costs include the value of needed services that are not purchased in the marketplace and a dollar value for lost opportunities (e.q. lost wages). When these costs are included in th analysis, the home dialysis patient expends, directly or indirectly, $27,400 anually, while the center patient's cost is $34,300. Thus, the actual cost of home dialysis is estimated to be 20% less than outpatient maintenance dialysis cost. This disparity in percentages (27% vs. 20%) is the result of calculating and including a value for the services of a home dialysis partner (or aide). Aide services are not federally reimbursable.

The cost of providing home dialysis includes the costs of equipment (purchased or rented), supplies, dialysis aide, maintenance and repair, patient training, facility use and backup, and associated medical treatments. In many cases a family member or friend serves as the aide and does not charge for his or her services. In Iowa, most home dialysis patients rent rather than purchase their machine. Typically, the machine is a portable Redy. This model is characterized by having a built-in water purification system which does not require household plumbing alterations. Supply costs reflects the type of supplies needed to use the Redy machine. The estimated annual costs are tabulated in Table 37.

Table 37

HOME HEMODIALYSIS COSTS		
Machine Rental (includes maintenance and repair)		$ 5,800[1]
Supplies (4-3 month kits)		14,200[1]
Training Cost (a first year cost)		6,600[2]
Dialysis Aide ($25 per session)		3,900[3]
Facility Use (10 visits)		1,800[3]
Associated Medical Treatments		1,700[4]
First Year Cost	$34,000	
Second Year Cost	27,400	
First Year Reimbursable Cost	30,100	
Second Year Reimbursable Cost	23,500	

[1]Cost derived from 1979 billed charges for Redy machine.
[2]Pre-Medicare settlement cost in one Iowa hospital.
[3]Cost based upon payments made to dialysis aides in the State of Washington. Payments ranged from $15 to $35 per treatment session.
[4]Paul V. Stange & Andrew T. Sumner, "Predicting Treatment Costs and Life Expectancy for End-Stage Renal Disease", The New England Journal of Medicine, 298:372-378, 1978.

Source: Compiled by Iowa H.S.A.

The cost of outpatient maintenance dialysis include the cost of the machine (depreciation or rent), supplies, physician fees, nursing and other salaries, maintenance and repair, associated medical treatments, patient travel, and facility overhead. Although hospitals will often have a portable machine, most are fixed within a designated area of the facility. The per-treatment, or unit, cost incurred at each hospital is displayed in Table 38. The average cost is $178.48 and the average unit cost limit is $173.79 for fiscal year 1978. The unit limit is set by DHEW on an individual hospital basis and represents a reimbursement ceiling.

Table 38

OUTPATIENT MAINTENANCE HEMODIALYSIS COST FOR ESRD PATIENTS

ESRD Facility/Center	Number of Treatments	Unit Cost Limit	Total Cost Limitation	Facility Cost
Henry Co. Health Center	1252	156.59	196,051	191,580
Iowa Lutheran	4807	207.00	995,049	1,045,239
Marian Health Center	N/A	N/A	N/A	N/A
Mary Greeley	1353	174.85	236,572	237,415
St. Francis	2205	151.00	332,955	287,937
St. Luke's	2918	160.00	466,880	472,396
Trinity Regional	1091	156.00	170,196	175,965
University of Iowa[1]	798	182.50 15.50	146,236 12,369	151,469 12,369
Average Unit Cost Limit[2]		$173.79		
Average Unit Cost		178.48		

SOURCE: Medicare Cost Data; Iowa Lutheran F.Y. ending 12/77, all other Hospital F.Y. ending 6/78

[1] In all hospitals except at the University of Iowa physician fees are included as a cost of providing dialysis treatments. Thus, the unit cost limit includes a physician component. Moreover, the hospital bills the patient and reimburses the physician. Alternatively, the physician may select to bill the patient directly. Under this option there is a cost limit of $201 per patient per month or approximately $15.50 per treatment unit.

[2] The sum of the lesser of total cost limitation or facility cost divided by total number of treatments.

The average unit cost and the average unit cost limit incorporate all costs specified above with the exceptions of patient travel and associated medical treatments. These costs, listed in Table 39, indicate an annual per patient cost.

Table 39

OUTPATIENT MAINTENANCE HEMODIALYSIS COSTS		
	Actual	Reimbursable
Average Cost Per Session	$ 178.48	$ 173.79
Inflationary Factor (12%)	21.42	20.85
Travel (50 miles round trip at 18¢ per mile)	9.00	- 0 -
Annualized Subtotal (3 sessions weekly)	32,588.00	30,364.00
Associated Medical Treatments	1,700.00	1,700.00
1979 Yearly Estimate	$34,288.00	$32,064.00

SOURCE: Medicare Cost Reports and Paul V. Stange & Andrew T. Sumner, "Predicting Treatment Costs and Life Expectancy for End-Stage Renal Disease", The New England Journal of Medicine, 298:372-278,1978.

The following considerations should be taken into account when comparing the cost estimates of home and outpatient maintenance dialysis:

1) The start-up costs for home dialysis are significant. These costs were not amortized, i.e., spread over, the second and subsequent years.

2) Facility use by home patients has been included but facility support cost has not. This is the cost of capacity held in reserve, i.e., idle, for patients who normally dialyze at home. This cost may or may not be significant.

3) The economic cost of lost wages is assumed to be the same whether the patient is treated at home or on an outpatient basis. It is a general belief that the unemployment rate for home dialysis patients is lower than the rate for center dialysis patients. Home dialysis patients have greater flexibility in scheduling treatments and are healthier.

4) Dietary costs are included (and are reimbursable) in the cost of outpatient maintenance dialysis. A similar cost component has not been included in the home dialysis cost estimate.

5) The annual supply cost for outpatient maintenance dialysis varies among hospitals from $7,300 to $12,300 and averages an estimated $9,300 per patient.

6) Hospitals in Iowa are not actively involved in developing self-help programs. Nor is there any incentive for them to do so. Physician fees and nursing salaries account for approximately 30% of total outpatient maintenance dialysis costs.

7) The cost of associated medical treatments for patients who dialyze on an outpatient basis was assumed to equal that for the home dialysis patient, i.e., $1,700. However, this underestimates the actual costs.

8) The cost of treating the ESRD patient, regardless of setting, has been conservatively estimated.

Since 1972, the national percentage of total patients on dialysis who dialyze at home has declined from over 40% to less than 10% in 1976. Various reasons for this decline have been offered. These reasons include changes in the patient population under treatment (e.g., the average age of ESRD patients has increased), professional disinterest in encouraging home dialysis, and increased access to institutional facilities. However, the major reason appears to have been the existence of financial disincentives for patients to undertake self-care dialysis. During the 1972-76 period, limitations on costs that were reimbursed by Medicare resulted in greater out-of-pocket expenses for the home dialysis patient than for the center dialysis patient.

Iowa has paralleled this national experience. The data below indicate a declining trend in the percent of patients on home dialysis from 1974 to 1977. However, the drop in percentages in Iowa was less than the nation overall. This is explained, in part, by the availability of supplemental coverage for ESRD costs and professional interest in home dialysis. The State of Iowa Chronic Renal Disease Program and the Kidney Foundation of Iowa provide financial support which augments Medicare.

Table 40

IOWA ESRD DIALYSIS PATIENTS

Year	Total Number of Dialysis Patients	Number of Home Dialysis Patients	Percent of Home Dialysis
1974	120	38	32%
1975	167	55	33
1976	211	58	27
1977	245	62	25
1978	301	84	28

SOURCE: Kidney Foundation of Iowa

With regard to ESRD services, the National Health Planning Guidleines set out the following standard:

> The Certificate-of-Need Standards should be consistent with standards and procedures contained in the DHEW regulations governing conditions for coverage of suppliers of end stage renal disease services, 20 CFR Part 405, Subpart U.

In February, 1980, the Department filed notice of proposed rulemaking to establish in the Iowa Administrative Code the Certificate-of-Need Standards for ESRD services. The standard includes the following characteristics, consist with the National Guidelines:

1) A minimum unit size of three dialysis stations performing at least four dialyses per station per week;

2) A minimim volume for transplant units of 25 transplants annually;

3) No new or expanded dialysis units unless all units within 90 minutes travel time are operating at a rate of at least seven dialyses per station per week;

4) No additional dialysis stations in a unit unless at least 35% of the ESRD patients in a facilities catchment area are using home or self-care dialysis; and

5) No additional transpant units established unless all of the existing units in the ESRD Network are performing at least 50 transplants annually.

In addition to this standard for ERSD dialysis facilities, the SHCC decided that availability to transplantation services were impeded by the lack of an adequate number of donors. In order to remedy this situation the SHCC includes the following goal:

GOAL 10: CADAVERIC ORGANS BE AVAILABLE IN SUFFICIENT SUPPLY TO PROVIDE FOR THE TRANSPLANTATION NEEDS OF CURRENT AND POTENTIAL IOWA RECIPIENTS.

Objective 1: By 1985, the number of cadaveric organ donors will increase sufficiently to decrease the waiting lists of potential Iowa recipients.

SRRA 1: By 1981, the Department of Health will assist the Iowa Kidney Foundation and other interested organizations to publicize the need for more organ donors.

SOURCES OF INFORMATION ABOUT ACUTE CARE

Acute care hospitals are defined and their specifications identified in the Code of Iowa and the Iowa Administrative Code. Specific references are made in this chapter to policies that are enumerated in the codes as well as policies articulated by the Statewide Health Coordinating Council. Policies are also expressed and implied in federal reimbursement programs, federal planning guidelines, state mandates in the previous Health System Plan, and Standards for the implementation of state laws.

The data from which the acute care program analysis is made comes from many sources. The Department of Health annually surveys hospital utilization and has historical data for all Iowa hospitals back to 1929. Specific surveys have examined patient origin, monthly variation in occupancies, and service unit activity. Financial information is available from the financial intermediary for Medicare and Medicaid patients and aggregate data is shared with the Iowa Hospital Association, the Blue Cross/Blue Shield groups, the Iowa Medical Society, the Iowa Foundatoin for Medical Care, other professional associations and the three Health Systems Agncies.

The acute care system is a most complex cluster of facilities, professional personnel, financial reimbursers, administrators and support staff. This cluster generates internal data as well as information that must be available for audits in support of government aid and reimbursement programs. Most of the data which does not identify specific consumers or physicians is available to the Department and the SHCC.

For more detailed information on capacities and services available in Iowa hospitals, consult the Iowa Medical Facilities Inventory. Copies are available from the Iowa State Health Department, Office for Health Planning and Development, Lucas State Office Building, Des Moines, Iowa 50319.

Footnotes

1. A Discursive Dictionary of Health Care. Prepared for the Subcommittee on Health and Environment of the Committee on Interstate and Foreign Commerce, U.S. House of Representatives. February, 1976.

2. I.A.C. 202.2(3)b.

3. DHEW, Utilization of Short-stay Hospitals, Series 13, No. 41.

4. The 20 counties with the lowest rate of admissions per 100,000 persons for all conditions in 1977 were:

1. Story (10,760)	11. Cedar (13,320)
2. Johnson (11,110)	12. Marshall (14,470)
3. Lyon (11,630)	13. Audubon (14,500)
4. Worth (11,730)	14. Bremer (14,610)
5. Winnebago (11,940)	15. Warren (14,740)
6. Winneshiek (11,990)	16. Hancock (15,160)
7. Sioux (12,200)	17. Tama (15,270)
8. Emmet (12,810)	18. Plymouth (15,310)
9. Osceola (13,100)	19. Allamakee (15,380)
10. Kossuth (13,310)	20. Sac (15,470)

The 20 counties with the highest rate of admissions per 100,000 persons for all counties in 1977 were:

1. Monroe (31,690)	11. Cherokee (22,990)
2. Cass (27,480)	12. Crawford (22,810)
3. Wayne (26,430)	13. Lee (22,800)
4. Appanoose (25,800)	14. Ida (22,460)
5. Decatur (25,110)	15. Clarke (22,320)
6. Montgomery (25,070)	16. Page (22,280)
7. Union (25,030)	17. Guthrie (21,850)
8. Van Buren(24,010)	18. Fremont (21,840)
9. Lucas (23,670)	19. Marion (21,310)
10. Monona (23,070)	20. Wapello (21,210)

5. Walter McClure, Reducing Excess Hospital Capacity. Interstudy,1976.

6. Controlling the Supply of Hospital Beds: A policy statement. Institute of Medicine, National Academy of Sciences. Washington, D.C., 1976.

7. See the following references:

M. Roemer & W. Shonick "HMO Performance," Milbank Memorial Fund Quarterly Summer 1973.
G. Sparer & A. Anderson "Utilization and Cost Experience of Low Income Families in Four Prepaid Group Practice Plans" New England Journal of Medicine, July 12, 1973.

J. Wennberg et al, "Small Area Variations in Health Care," Science, December, 1973.

_____, "Patterns of Use of Common Surgical Procedures," Journal of Maine Medical Association, May 1975.

_____, "Conditions Explaining Hospital Admission," Journal of Maine Medical Association, October 1975.

8. This phenomenon is often referred to as the "Roemer Effect", based upon the research of Romer and Skain which gave credance to the statement that "beds beget patients". See M. Roemer and M. Skain, "Hospital Utilization Under Insurance" (American Hospital Association, Chicago 1959)

9. Patterns of Hospital Use. Iowa Health Systems Agency, March, 1980.

10. Newsletter, Iowa Foundation for Medical Care, December, 1978.

11. Ibid.

12. Ibid.

13. Newsletter, Iowa Foundation for Medical Care, March, 1980.

14. Howard Hiatt: Protecting the Medical Commons: Who Is Responsible?" New England Journal of Medicine, July 31, 1975, P. 237.

Also see LoGerfo, James P., et al. "Tonsillectomies, Adenoidectomies, Audits: Have Surgical Indications Been Met?" Medical Care, Nov. 1978, Vol. 16; Roos, N.P., Henteleff, P.D. and Roos, L.L. "A New Audit Procedure Applied To An Old Question: Is the Frequency of Tonsillectomies and Adenoidectomies Justified?" Meidcal Care, January 1977, Vol. 15; McClure, W., Reducing Excess Hospital Capacity, Interstudy, 1976, p.13; Wernberg, J. and Gittlesohn, A. "Small Area Variation in Health Care Delivery", Science, 1973, p. 1102-1108; and Bloor, M.T. et al. "Geographical Variation in the Incidence of Operations on the Tonsils and Adenoids." Journal of Laryngology and Otolargyngology, Sept. and Oct., 1978.

15. Philip G. Weiler and Eloise Rathbone-McCuan, Adult Day Care: Community Work with the Elderly, Springer Series on Aging, 1978, P. 16.

16. Ibid.

17. For more detailed information see Iowa Medical Facilities Inventory. Copies are available from Iowa State Health Department, Office for Health Planning and Development.

18. Federal Register, Vol. 43, No. 60, March 28, 1978, pages 13044-5.

19. Ibid

20. DHEW, Health Care Financing Administration, Health Care Financing Trends, Winter, 1980.

21. Freeland, Mark S. et al, "National Hospital Input Price Index" Health Care Financing Review, Summer, 1979.

22. Ibid.

23. McKinsey and Company, Inc. "Implications of the Canadian Health Regulatory Experience for U.S. Federal Health Regulatory Policy", report under contract HRA 231-77-0122, Washington, D.C., July, 1978.

24. Cohen, Harold A., "Information Needs in the Public Sector", Medical Technology, DHEW, National Center for Health Services Research. Research Proceedings Series. September, 1979.

25. Gibson, Robert M. "National Health Expenditures, 1978". DHEW, Health Care Financing Review, Summer, 1979.

26. Freeland, op. cit.

27. Chapter 347.16, Code of Iowa (1979), also see Chapters 225, 252, 252A, 255, and three hundred and forty-seven point twenty-one (347.21).

28. Patient Information on Hospital Service Area (P.I.H.S.A.) Study, 1977.

29. Chapter 514.4, Code of Iowa (1979).

30. Utilization of Short Stay Hopsitals, 1977, U.S.N.C.H.S., and Iowa Diagnostic Study, 1977, Iowa Hospital Association.

31. Ibid.

32. Ibid.

33. Ibid.

34. Herman A. Hein, M.D. "The Quality of Perinatal Care in Small Rural Hospitals," Journal of the American Medical Asosication. November 3, 1978.

35. The analysis of End Stage Renal Disease draws generously on the text provided in the Iowa HSA's 1980-85 Health Systems Plan.

36. Report to the Congress: Treatment of Chronic Kidney Failure-Dialysis; Transplant, Costs, and the Need for More Vigorous Efforts. (Washington, D.C.: Comptroller General of the United States, June 24, 1975).

Chapter Six

Long Term Health Care

I. Definition of Long Term Health Care

A. Essential Concepts

Long Term Care is a descriptive phrase for a variety of services and providers who deal with chronic and long term disabling conditions. These services are generally seen as having two puprposes or desired outcomes. First, they are to help improve, restore, or maintain a person's functional abilities. Second, the person's overall ability for independent living or self direction are to be enhanced as much as possible. (This is sometimes discussed as providing the least restrictive environment.)

"Functional abilities" refers to the capacity to act or carry out activities. Various scales and systems of assessment look at abilities needed to keep a house, care for yourself, make decisions, cope with major and minor problems and frustrations, and live with other people. (See the section on assessing functional abilities which follows.) Capacity for independent living is related to the sum of all functional abilities and the way in which services are managed and coordinated.

These essential concepts have been identified in whole or part by the Plan Development Task Force on Long Term Care and each 1980 Health Systems Plan. They are the themes of the definition of long term care used in this 1981 State Health Plan.

B. Definition Based on Essential Concepts

A definition establishes limits to a concept or discussion. It can say what is included, excluded, or both. It can also state what actions or results are expected. A definition of long term care was felt to be desirable exactly because it can offer a summary statement of the goals of long term care and the services analyzed.

The definition used in this year's plan is based on extensive discussions by the Plan Development Task Force on Long Term Care, and on staff analysis. It also closely matches definitions used by the Health Systems Agencies. There is some controversy involved, not withstanding the broad base of opinion and knowledge it is based on. The implications of the definition are presented below, along with the high points of any controversy.

Incorporating, then, the concepts presented above, the following definition is offered.

Long Term Health Care is those services needed to manage chronic and long term disabling conditions over an extended time, which are intended to improve, restore or maintain the basic physical, intellectual, emotional and social functioning of a person at the highest level of independent action possible.

C. Implications of Definition

There are several clear implications of this definition. First, it avoids speaking of "least restrictive environment" or "deinstitutionalization." These phrases, which have been extensively used in social and health care literature and goals, focus on the service setting rather than the outcome or purpose of care. This makes it difficult to evaluate the need for services and resources in planning. They are also imprecise terms.

In a recent article on the idea of least restrictive environment in mental health, Dr. Leona Bachrach, Associate Professor of Psychiatry, University of Maryland School of Medicine, notes that

> "For many, the concept of the least restrictive environment - sometimes called the least restrictive setting or the least restrictive alternative - is the quintessence of deinstitutionalization...yet it is difficult to find an operational definition for the concept, one that translates readily into tangible empirical referents...Actually, the notion of least restrictive environment has several dimensions. It is both a legal and a clinical concept that represents an effort to grant mentally ill persons a full complement of personal rights and civil liberties as they undergo the most effective treatment for their illness." (1)

She goes on to observe that the imprecision in terms actually serves to cover a lack of action or improvements in a patient's civil rights and personal autonomy, and reductions in social isolation. (2) Appropriate placement, she concludes, should be based on individual service plans which assess a person's role performance, functional capabilities, and specific service needs. Placement can only proceed when these aspects and the service capacities of settings and providers are clearly known. There is no assumption that one setting is less restrictive than another.

The definition of long term care presented here focuses on functional abilities and maximum independent action. It speaks more to the clinical or outcome of care aspects than to the legal aspects, though legal and social goals are assumed. It assumes that a total institution which isolates persons from the rest of society is the least desirable service mode and setting and should be used only in extreme cases. It recognizes the legal decisions of the past twenty years severely restricting involuntary admissions and treatments without consent. (See also section on Trends Affecting Long Term Health Care.)

The second major implication is the focus on health care services, that is, the separation of health care and activity support services. On one side are those health care services which improve, restore or maintain basic functions of the individual. On the other side are those services which fill in when function cannot be restored, that is, they support the activities of the person.

There was much discussion in the Task Force of the need for, or appropriateness of, this distinction. Most members disagreed with excluding support services from the definition and argued that there is a thin line between health care and support services in their effect on a person's health.

Support services are, of course, very significant. The need for support services defines the level of independence a person can have within a setting. A lack of support services will result in deteriorating health. It is thus sometimes difficult to apply the distinction. For example, support services in a nursing home are provided under direction of health care personnel as part of an overall plan of care.

Staff recognizes these limits, but still feels that adopting this distinction and focus on health care is the best approach. The reasons for this recommendation become clear by asking whether a service such as transportation should be analyzed in the State Health Plan.

Transportation is necessary if a person is to have access to centralized care outside of a home or an institution. There is no disagreement on this point from any quarter. There are questions on how health planners and health care providers can see that transportation is available, and whether health plans should include objectives and actions to increase or change transportation or other support services, however.

One consideration in answering these questions is the limited resources of health planning agencies and volunteers. Time, money and influence are becoming scarcer as budgets tighten, and implementation and regulatory activities expand. The health planning system has, or is developing, information and expertise in dealing with health care, and advocating change. Should these resources be used in acquiring a working knowledge of an area which claims its own experts, legislation and literature in planning?

Another consideration is the weakness of ways in which health planning might intervene. Calling for reimbursement of transportation through health care programs would not increase the number of buses or vans able to accomodate wheel chairs. That requires basic transportation planning and funding of development and start-up costs. Reimbursement might allow for limited use of taxies or some type of private arrangements. This would have a small impact on the problem, however, and would be expensive. It would also be difficult to administer. Program administrators and legislators are likely to be wary of such benefits.

Advocating levels and kinds of transportation services would require extensive analysis. Facilities could own their own vehicles but operating expenses and maintenance would make them expensive and/or unprofitable for all but the largest homes. If vehicles are to be shared, legal issues of ownership and responsibility must be settled. Services for the non-institutional population must be investigated as part of existing public transit, whether general or specialized, and as new services.

If services like transportation are not considered in the health plan in any detail, or at least are not addressed by goals and objectives, where should they be dealt with? Staff opinion is that support services should be recognized in health plans, and where deficits or problems are identified in local planning (HSAs) they should be forwarded to appropriate agencies by the state (Health Planning and Development). As of now, no specific problems or objectives have been identified by local health planning.

It may be that in the future human resources planning will be integrated

so that the issues of health care and transportation can be considered together. Staff believes such integration would be desirable. It remains to be seen whether "bi-lateral" agreements or a comprehensive overhaul of public planning would be more feasible or preferrable. This may be an appropriate issue for health planning to present for public debate. In setting priorities for resources, it would probably be more beneficial if health planning improved its own operations before entering into agreements with other agencies or sponsoring public referendums.

Staff also recommends that support services should be considered in some way with health care for those settings and providers dealing with people who are most dependent, e.g. inpatient nursing care. Here, there is traditional public responsibility for the quality of institutional services, for the basic life and safety of residents who are very dependent. The State Health Department is and should be involved in setting standards for staffing, minimal services, coordination of services, and in monitoring compliance.

In the home and other settings there is usually less public investment and state monitoring, but a larger number of programs providing services. Title XX and Title XIX of the Social Security Act, Title VII of the Older Americans Act, and the Older Americans Act in general provide home health support, referrals, meal/nutrition service, counseling, and transportation. There are no uniform state or federal standards for training of health aides, financial eligibility for services, or overall quality of services. The Iowa Department of Social Services, Area Agencies on Aging and many private agencies are all in this business.

Monolithic state statutes and regulations or a comprehensive services program are probably not the answer. It would be difficult to codify even a majority of the situations, potential providers and possible services which fall into this category. Categorical reimbursement programs always tend to arbitrarily limit people and services who are eligible. This stifles experimentation and construction of unique services and packages of services to fit a situation.

There are also variables of taste, background, personal goals or expectations as well as finances and the health of the person involved in setting standards for care and predicting need. These variables influence "need" much more than with health care. It could be said that we should rightly equate need with demand for these services, though not offer payment for everything.

A goal which could be present in health plans would be to call for greater formal and informal coordination between health and support/social services. Objectives could focus on problems in local service delivery as well as state policy issues concerning cooperation between agencies. This first step to integrated human services planning is suggested in the goals and objectives on continuity, and in the planning assumptions.

Finally, the definition covers a wide range of services and settings, and implies that more than medical and nursing home care should be available. This desirable range is addressed in the planning assumptions in the section on existing policy.

Other planning definitions of long term care are closely related. In summary these are:

Iowa's Health Systems Plans

1. Illowa Health Systems Agency - 1980 Health Systems Plan, page 470

" 'One or more services provided on a sustained basis to enable individuals whose functional capacities are chronically impaired to be maintained at their maximum level of health and well-being.' " (Quotation from Elaine Brody, Long Term Care of Older People; A Practical Guide)

"Long Term care services should go beyond only maintenance functions. A service system should be developed that will meet the health needs of individuals who require a wide spectrum of services. These services should extend beyond direct health care services to include supportive services designed to enable the individual to function at maximum capacity."

2. Iowa Health Systems Agency - 1980 Health Systems Plan, page 100

Defines habilitation, rehabilitation, maintenance services in terms of restoring or maintaining the fullest physical, mental, social, vocational and economic usefulness of which they are capable.

3. Health Planning Council of the Midlands - 1980 Health Systems Plan

No overall definition. Various types of services are defined including habilitation, rehabilitation, maintenance and inpatient nursing services. There is analysis of each type.

1979 Draft State Plan for Mental Retardation

There is no separate definition of long term services, but most MR services fit that category. A specific service goal (number II), states that the Department of Social Services is to

"...establish and implement a policy on placement that is based on the philosophies of normalization, individualization, least restrictive environment, accessibility to services, availability of services, responsiveness of services, voluntary choice, responsiveness to a developmental model, maximization of existing resources, location of services within the community and responsibility for implementation."

1980 State Plan for Developmental Disabilities

Developmental disability is defined in terms of severe, chronic impairments in areas of major life activity. Services are to enable the developmentally disabled "...to achieve their maximum potential." (p. 2) (See also the section on functional assessment for a description of major life activities.)

II. Description of Long Term Health Care Services

A. Categories of Services

The long term health careservices analyzed in this plan can be described according to general types of service, setting and organization, as below.

Types of Long Term Health Care Services

- Nursing assessment and care
- Medical assessment and treatment
- Dental consultation and care
- Nutritional assessment and services
- Pharmacy services
- Rehabilitative services (speech, physical and occupational therapy)
- Psychiatric care and therapy
- Counseling
- Socialization
- Comprehensive functional assessment/discharge planning/care planning and referral

Settings of Services

- Inpatient (ICF, SNF, hospital)
- Home
- Day care/respite care organization
- Out-patient clinic
- Private practitioner's office

Organization of Services

- Multi-service organization involving more than one kind of practitioner
- Single service organization/group practice
- Solo practitioner

Some of the above services are usually thought of in other contexts or defined as other levels. Medical and dental care are essential to any person's well being, however. Someone who is disabled or handicapped or simply getting older presents special medical and dental problems. These problems have not always been recognized or dealt with in either theory or practice and should be addressed in a discussion of long term health care.

For example, pharmacists face special challenges in serving the elderly and handicapped, especially those in institutions. Pharmacists are largely not integrated into long term care in policy or practice, except on individual initiative, which compounds these problems. Pharmacists could offer a great deal of information and service to their clients and other professionals which could improve the quality of care. The integration of pharmacists into long term care should be considered in all health plans.

The designations of rehabilitation, habilitation, and maintenance have not been used, because the same service can be all three depending on the condition of the person. These terms have their place in individual plans of care, to guide therapy. They do not indicate the relative intensity of services needed between cases, however, and thus can not be used for predicting the need for resources. These terms may indicate the length of time services will be necessary.

Below are descriptions of the specific long term health care services which are available to some degree in Iowa. They are listed in no particular order.

B. Hospice Care

Hospice care is an idea of serving more than the physical needs of seriously ill or dying persons. Religious orders in Europe during the thirteenth to sixteenth centuries provided the first hospice care for pilgrims and the poor. In the 19th century hospices for care of the dying were established in Lyon, France and Dublin, Ireland. About the turn of the century the Irish Sisters of Charity established St. Joseph's Hospice in London, while two others were sponsored by an Anglican Order and the Methodist Church.

St. Christopher's Hospice in London and the Royal Victoria Hospital in Montreal, Canada, are two programs that have gained recognition in the United States for developing advanced techniques for managing pain and symptoms associated with terminal illness. St. Christopher's is a home care program with a freestanding inpatient facility, while the program at Royal Victoria is organized as an inpatient unit in a hospital with a home care program. Most of the hospices operating and developing in the United States use the British and Canadian hospices as models. Hospice, Inc. of New Haven, Connecticut, was founded in March of 1974. The program emphasizes home care, and has a freestanding inpatient facility, the first formally established coordinated program in the United States.

In addition to the nursing care, spiritual and emotional support, and home care that reportedly characterized the early European hospices, modern hospices provide palliative care.

Public interest in the hospice care concept has developed only recently within the United States in response to public recognition of gaps in services delivery for the terminally ill. Health care in the United States historically has been oriented toward the management of in-hospital acute-care episodes, and treatment is curative in nature. The management of a known terminal disease or illness does not always lend itself to this model. Extended care facility and/or maintenance facilities often are similarly ill-equipped to fully respond to the needs of the dying person and his/her family.

The modern concept of hospice recognizes the dying person and his/her family as the essential unit of care. In most programs, "significant others" (persons recognized as close to the dying person) may also be included in the treatment process. An interdisciplinary team is used to assess the physical, psychological, emotional and spiritual needs of the patient and family in developing an overall coordinated plan of care. Pain and the symptoms associated with the terminal illness and its previous treatment are controlled but no heroic efforts are made to cure the patient. The family and/or significant others are aided in overcoming their emotional suffering after the death of the patient through bereavement care.

Hospice care may be delivered in a variety of settings, either as part of an already-established facility or program of services or as a separately established program. Settings may include the following: (1) the home; (2) outpatient clinic; (3) inpatient facility (long-term care facility or hospital); or (4) a freestanding hospice.

There currently are four (4) for-profit hospital-based hospice facilities

within the United States. The great majority of hospice programs are non-profit corporations (49 of 59 total hospice programs). Of the 49 organized as non-profit corporations, 19 are hospital-based programs, one is a skilled nursing facility, and 26 have outpatient status only. (3)

The following table shows the types of services offered by U.S. hospices:

SERVICES PROVIDED BY

THE 59 OPERATING HOSPICES

Services	Percent of Hospices which: Provide Service	Coordinate or Make Referrals (note a)	Do Not Provide, Refer, or Coordinate Service
Medical Services:			
Home health, skilled nursing care, and aide	68	20	12
Home visits by physicians	41	30	29
Psychiatric consultation	46	24	30
Pain Control:			
Medication	63	22	15
Surgery (note b)	7	59	34
Radiation (note b)	7	66	27
Physical Therapy	41	39	20
Occupational therapy	29	32	39
Inpatient care	30	36	34
Ambulatory Services in an Oupatient Facility	19	30	51
Supportive services:			
Bereavement followup	93	2	5
Day Care for Patient	10	7	83
Homemaker Services	30	48	22
Meal Preparation at home	17	59	24
Respite Care (note c)	63	5	32
Death Education	61	3	36

a/Seventeen percent of the hospices do not make referrals to other agencies.

b/These services are rarely performed since they are normally not medically necessary to relieve terminally ill patients' pain.

c/The patient receives total care from hospice representatives in a facility or in the home so that family members or primary care givers in the home may have a couple of days or more of rest from the stress of caring for the patient.

SOURCE: Hospice Care - A Growing Concept in the United States, Report to Congress by the Comptroller General, HRD-79-50 March 1979, p.14.

"Hospice" today is a term copyrighted by the National Hospice Organization, which has developed standards similar to those of JCAH for hospitals and nursing homes.

C. Home Centered Nursing and Other Home Health Care

Home centered health care used to include both medical and nursing services. Today it encompasses only nursing, therapeutic and health aide services. Current interest in home centered care grows out of concerns over increasing health costs and the quality of life for the elderly and disabled. (See section on problems in health care for further discussion.)

Home centered health care, especially community and home nursing, attempts to evaluate a person's health within their home environment to support the individual, and to teach them how to deal with their health problems at home.

Specific services include insulin injections, teaching self injections,

monitoring ostomies, teaching self care of ostomies, skin care, and assistance with personal hygiene. Home care is provided after hospitalization or discharge from a nursing care facility, or after independent referrals. Persons receiving home care vary greatly in type and degree of disability.

Home health care is provided by 91 county health departments, two city agencies, three city-county agencies, seven private Visiting Nurse Associations, two hospitals and an unknown number of nursing homes. Home care organizations are not licensed in Iowa. To receive Medicaid or Medicare reimbursement, however, they must be certified by the State Department of Health.

Certification requires a minimum number of services (nursing and one other) and minimum staffing. Other organizational standards must also be met. To be reimbursed, the home health care must be prescribed by a physician and provided in the person's home. An individual plan of care is established for each patient and periodically reviewed by the physician.

The general types of services recognized by Medicare and Medicaid are:

- nursing
- homemaker/home health aide
- medical social services
- physical therapy
- occupational therapy
- speech therapy

D. Specialized Clinics

Various specialized outpatient services are available, including adult day care, health screening (well-elderly), facility based habilitation and rehabilitation services, and drug abuse treatment clinics.

Adult day care centers provide a program of ambulatory care during the day in a group setting away from home. Participants may spend up to eight hours per day, seven days per week at the day care center, depending on their needs. Professional and paraprofessional staff develop individual treatment plans with specific goals to meet the needs of each participant. Centers may focus on medical services, social services (socialization), or both. The provision of habilitation, rehabilitation, and maintenance services through such a program can shorten a hospital stay, prevent or delay long-term inpatient care, and can assist the individual in making the transition from inpatient facility to the community. Adult day care allows for both continued progress of habilitation or rehabilitation, and encourages maintenance of functional capacity, while giving families of impaired individuals a respite during the day.

Rehabilitation outpatient and inpatient units provide coordinated multidisciplinary physical restorative services to ambulatory patients under the direction of a physician knowledgeable and experienced in rehabilitation medicine. (4)

Health screening, such as well elderly clinics, test persons for hypertension, diabetes, glaucoma and other chronic conditions. They may also assess the overall health and health habits of individuals. Overall,

these screening clinics are part of an effort at early identification and diagnosis of debilitating conditions. When a condition is detected a referral is made to a family or other physician.

Well elderly and other screening clinics are sponsored by the State Department of Health, Iowa Commission on Aging, counties, the University of Iowa, church groups and others. For more information see the Preventive Services chapter, page 176.

Substance abuse clinics are programs to treat the physical health problems associated with abuse of alcohol and other drugs after acute detoxification. They also provide counseling and support for persons trying to become drug free.

Service delivery of substance abuse treatment services are provided primarily by private not-for-profit community programs. The Iowa Department of Substance Abuse provides the federal and state funding, allocated via grants and contracts, to these programs for service provision. Drug and alcohol treatment services are provided via three types of community programs. These programs are (1) separate independent drug treatment or alcohol treatment programs, (2) independent combined drug and alcohol treatment programs which are administratively but may or may not be clinically merged, (3) drug and/or alcohol treatment components housed and administered by a community mental health center.

E. General Long Term Inpatient Nursing Care

Intermediate care facilities (ICF) provide accommodation, board, nursing care and supporting services as directed by a physician to three or more individuals, not related to the adminstrator or owner..., who by reason of age, illness, disease or physical or mental infirmity require continuous nursing care and related medical services or occasional skilled nursing care. but who do not require hospital care. (5) They are a state licensure category and a category for reimbusement.

Skilled nursing care facilities (SNF) provide accommodation, board, and nursing care and supporting services as directed by a physician to three or more individuals, not related to the administrator or owner..., who by reason of age, illness, or disease or physical or mental infirmity require continuous nursing care and related medical services, but who do not require hospital care. The main difference between ICF and SNF in Iowa is the requirement of 24 hour direct supervision by an R.N. in all SNFs. (6) They are a state licensure category and a category for reimbursement. Most SNFs and ICFs are free-standing facilities. Some are part of hospitals.

F. Specialized Long Term Inpatient Nursing Care

Community based intermediate care facilities for the mentally retarded (ICF/ MR) provide the same nursing care as an ICF and additional programming to meet the social, emotional and intellectual needs of mentally retarded and developmentally disabled individuals.

The state hospital schools at Woodward and Glenwood are certified by Medicare and Medicaid to provide ICF/MR services, but operate under a

special hospital license from the State Health Department. They provide the most specialized programming services and perform diagnoses and evaluations.

County care facilities (CCF) provide long term nursing care to a wide variety of indigent persons, including the physically disabled, mentally retarded and chronically mentally ill. CCFs may be licensed as ICF, ICF/MR, RCF, or RCF/ MR. Some beds may not be licensed. The degree of programming in any facility depends both on management and the money available from the county.

G. General Residential Care

Residential care facilities (RCF) provide accommodation, board, personal assistance and other essential daily living activities to individuals who by reason of illness, diseases, or physical or mental infirmity are unable to sufficiently or properly care for themselves, but who do not require the services of a registered or licensed practical nurse except on an emergency basis. (7) RCF is a state licensure category and a category for reimbursement.

H. Specialized Residential Care

Residential care facilities for the mentally retarded (RCF/MR) provide the same personal care as residential facilities, and the same programming as ICF/MR facilities. RCF/MR is a state licensure category and a category for reimbursement.

Residential care for substance abusers is provided through various programs funded through the Iowa Department of Substance Abuse. The total capacity of these services is currently about 103 persons per month. (See 1980 Substance Abuse Plan, pp. 15-16.) Services include follow-up care after acute detoxification and counseling. Some act as transition homes between drug dependency - the situations the abuser was involved in, and new social and work contacts.

I. Long Term Inpatient Care for Mental Illness

Persons with chronic or long term debilitating mental illness are cared for in four inpatient settings in Iowa - the State Mental Health Institutes, hospital based psychiatric units, in nursing homes and in county care facilities as noted above.

Iowa has four mental health institutes which are licensed as hospitals. (Described in Iowa Code, Chapters 217-229.) Programs are available as follows (though not all at each Institute):

- adult psychiatric
- geriatrics
- medical
- alcohol
- drug abuse
- children
- adolescents

Hospital based psychiatric units, including those at the University of

Iowa, provide acute intervention and stabilization as well as some extended care for mental illness. (See the 1980 State Medical Facilities Inventory for information on which hospitals offer these services.)

Nursing homes also serve some people who have mental illness as a primary diagnosis. A 1978-79 Department of Social Services survey of ICF residents showed that about 4.7% of all residents had mental illness as a primary diagnosis, and an additional 3.9% as a second diagnosis. (Surveys conducted by DSS Resident Care Review Teams) Obviously, nursing homes are not intended to treat mental illness and it may be asked whether these placements are appropriate and how treatment and programs can be provided.

County care facilities vary greatly in their ability to provide care specifically for mental illness. There is an increasing interest by the counties and state agencies in evaluating the care that is available in the CCFs, and possibilities of expanding that care. Three MHIs are now cooperating with county facilities in staff development and need assessment. (See 1979-80 State Plan for Mental Health Resources, Iowa Mental Health Authority, pp. 191-194.)

J. Long Term Outpatient Care for Mental Illness

Most outpatient care for mental illness is providedby private professionals and by Community Mental Health Centers (CMHC). Private professionals engaged in direct care include psychiatrists, psychologists and counselors. The CMHCs are private, non-profit corporations.

Community Mental Health Centers have a long history in Iowa. Direct community support (county and other funding) has been the impetus and mainstay of all of Iowa's centers. Nationally, most centers are dependent on federal grants and loans and have trouble replacing diminishing federal dollars. In Iowa, 65% of all center funds come from counties and less than 10% are federal.

CMHCs provide many diagnostic and treatment services, from psychotherapy to peer support groups to divorce adjustment groups for children. The exact services available at any center varies quite a bit, though the service goals and philosophies are very similar.

Community Mental Health Centers are currently accredited by the State Committee on Mental Hygiene, based on the recommendations of the Iowa Mental Health Authority.

K. Pharmaceutical Services

Greater knowledge of the chemical nature of disease and behavior and an increased "cabinet" of effective pharmaceuticals has had a definite effect on long term health care. There is a steadily increasing array of drugs to treat at least the symptoms of chronic and long term disabling physical and mental illness. It has been said that community based half way houses and other community mental health services are possible only because of new mood altering and tranquilizing drugs.

Pharmacists are registered by the state and dispense drugs according to physician's orders. They also monitor an individual's overall use of

medications and advise both consumers, physicians, and other providers on potential adverse side effects, drug-interactions and on counter indications.

L. Medical and Dental Care for the Handicapped and Disabled

As noted before, providing medical and dental care to the handicapped and disabled presents special problems to providers. There can be problems in arranging visits, obtaining information, explaining procedures and obtaining cooperation. Persons with nervous system disorders may have trouble controlling involuntary movements during treatment.

The basic dental and medical services are not different, of course. There must simply be special attention paid to identifying and delivering these services. This recognition is growing in medical and dental schools and should be expanded to existing providers.

M. Assessment and Coordination Services

Assessment and coordination services is a relatively new category of service, encompassing functional assessment, evaluation of service "needs", discharge planning, referral procedures, rehabilitation consultation and other professional consultation.

Functional assessment examines how well a person is able to do various daily activities or basic physical activities such as bathing, eating, toileting, and coping with stress. It determines the functional status (as opposed to the health status) of a person. A functional assessment may also examine broader categories of activity such as ability to live alone, or be economically self sufficient, based on the more specific items. This State Health plan emphasizes functional assessment as a way to determine need for services, evaluate the outcome of care, and coordinate referrals.

Coordinated evaluation of service needs refers to the coordinated consideration of functional status and health status information by social workers and health care providers. It occurs prior to admission to a facility or service rather than before discharge. Discharge planning is nearly the same, except for timing and the fact that the current provider may take the lead in discharge planning.

Rehabilitation and other other professional consultation may be provided during care planning, assessment or treatment. These consultations can provide valuable information on the potential and progress of a person.

Assessment and coordination services may be free-standing, such as the Iowa Gerontology Model Project on assessment of the functionally dependent adult in Davenport. Most such services will exist within other health care provider organizations. The purpose of recognizing this category of service is to promote development within present organizations and to encourage experimentation in distinct, free-standing services.

III. Trends Affecting Long Term Health Care

Public policy toward nursing homes and all forms of long term health

care has come under increasing scrutiny during the last decade. This attention is most obviously the result of increased use of these services and the large and growing amount of public money involved. Increased use and government involvement can themselves be explained by four trends, however. These are

- changing disease patterns and health concepts;
- improved medical technology;
- changing social structure; and
- changing social values.

First, there have been large shifts in the types of diseases most prevalent and in ideas of health over the last century. Chronic diseases and long term disabling conditions have become the most important causes of death and illness. The success of traditional public health programs in preventing communicable disease and the growth of medical knowledge of acute disease processes, along with improvements in nutrition and sanitation, have all decreased the occurrence of infections disease. Thus the proportion of remaining morbidity and mortality which can be cured by specialized, short term acute care is smaller.

There has also been an absolute increase in the occurrence of chronic disease. The modern sedantary life style, with too much food and alcohol, has resulted in more chronic degenerative diseases such as arteriosclerosis. Improvements in medicine, nutrition and sanitation have also increased life expectancy, and consequently, risk of chronic diseases. In industrialized countries today, 50% of women live beyond 75 years of age and 50% of men live beyond 70. (8) An absolute increase in chronic and disabling conditions may also be attributed to substance abuse besides alcohol, accidents and the Korean and Vietnam Wars.

As noted, this changing pattern of disease has decreased the portion of remaining mortality and morbidity which can be reduced through acute care or which can be analyzed using an "organic" definition of health focusing on separate body systems. A much larger part of all health problems today can only be treated, or persons maintained, through long term multi-disciplinary regimens. When death or illness results from more than one cause, as with chronic conditions, it is difficult to attack this mortality and morbidity.

Secondly, improvements in medical technology (as opposed to basic knowledge) have produced a large number of "half way" measures which deal with the consequences of disease and postpone death, but do not cure or prevent. Renal dialysis and neonatal care are good examples here. We have many people living with uncurable diseases and moderate to severe disabilities who ten years ago would have died.

The third factor is a changing economic and social structure. Economic growth and the removal of social barriers to mobility has scattered families across the country and reduced the economic importance of parents and grandparents, as well as of children. Families are smaller and the generations separated.

There has also been a growth in the number of "caring" or "helping" professions. Social workers, home nurses, health aides, homemakers, etc., have stepped in to perform many tasks for the elderly and infirm

that were previously done by families. This has been partly due to the fragmentation of families mentioned above, and partly to the growth of the "service" sector of the economy and the decreased importance of direct production of goods (post-industrial society).

Finally, there have been large changes in social values over the last fifty years. There is now a greater demand for public services of all kinds. More value is placed on public services and more is expected. There are also increased expectations for public assurance of the quality of services and the accountability of providers for the money they receive and the care they deliver.

There have been dramatic turns in the law regarding the treatment of persons with chronic debilitating conditions, especially in mental health. (9) The rights of patients are more clearly defined. They may not be involuntarily committed or isolated from society and "normal" or "mainstream" (10) activities unless there are very pressing considerations, usually that they are a present danger to themselves or others. Public attitudes toward large institutions and what is desirable care and results have also changed from favoring institutional care to disapproving.

VI. Current Challenges for Public Policy

The trends above have resulted in four challenges for public policy and public representatives. These are:

- increased use of long term health care;
- increasing demand for long term health care;
- changing patterns of demand; and
- increased pressures on existing quality assurance and accountability mechanisms.

Increased use of long term health care, primarily nursing home care, has put a great strain on public and private budgets. It has been estimated that between 1950 and 1977, all expenditures for nursing home care grew from 1.7 billion dollars to 7.7 billion. Over this period nursing home care increased from 1.7% of all expenditures to 7.7% of the total. (11) In Iowa in FY 1979, payments to skilled and intermediate nursing homes amounted to 42.3% of the Medicaid budget(down slightly from the previous year). With payments for nursing home care for the mentally retarded, nursing home care amounted to 58.5% (up slightly). Overall, the increase in total Medicaid nursing home expenditure from 1977 to 1979 in Iowa is about 21%, less than the national increase of 31% from 1975 to 1977 (public and private as reported above).

Although nursing home care is a strain on public budgets, it can be catastrophically expensive for individuals. Medicare benefits are limited to skilled nursing care, and only 3% of all public payments for nursing home care in Iowa go to skilled care (Medicaid and Medicare, CY 1978). Because there is almost no private insurance coverage, the pattern is for an individual to exhaust their own resources and then fall back onto Medicaid.

The second challenge is in increased demand for long term health care. Public health officials, providers, and the public are calling for more

services, a greater variety of providers and services, and a comprehensive, integrated delivery system. The growing number of elderly, the increased proportion of frail elderly over seventy-five and the increase in the number of permanently disabled noted above all contribute greatly to this demand.

The pattern or type of demand has also been changing. The mentally retarded, for example, have received intensive institutional programming and services over the past fifteen to twenty years, both in nursing homes, schools and sheltered work environments. If these services' goal of normalization is attained, may persons could be graduating to more unstructured settings. Many should have obtained the maximum possible benefits from their current programs. Also, there has been a slight shift in the proportion of disabled who are younger than 65, with the youngest (under 17) showing the greatest increase. (See table 4, section on health status problems.) Changes in the age structure, the increase in the number of frail elderly noted above, will shift demand in geriatric care to more intensive support and nursing care.

Finally, there are rising pressures on existing quality assurance and accountability mechanisms to improve and maintain quality and to account for how public money is being spent. This pressure is directing attention to weaknesses in state regulations and management information systems.

V. Statewide Policies on Long Term Health Care

Policy here is defined as the most general purpose of function or a program or piece of legislation. Policy is sometimes explicit - contained in laws, rules, goals, objectives, etc. - but many times it is implicit. Implicit policy can be the result of covert goals which are not socially proper or advisable to announce (e.g. "urban renewal" turning into "minority removal"). More often, implicit policy is the result of unexamined assumptions and reactions to demands.

Six federal acts directly affect the provision of long-term care, i.e., those laws creating the Medicare and Medicaid programs, Professional Service Review Organizations (PSROs), the national system of Area Agencies and the State Commissions on Aging (the Older Americans Act), Title XX, and the National Health Planning and Resource Development Act of 1974 (P.L. 93-641). (12) Medicare is a quasi-insurance program covering health care for the aged and disabled. Medicaid is a social welfare program providing payments for health care for low income persons. The Older Americans Act of 1965 provides grants to the states for a wide range of services benefiting the elderly. Title XX provides grants for social services. Professional Service Review Organizations review the need for skilled nursing care for Medicare reimbursement and for all Medicaid payments for nursing home care in Iowa. (13) The various acts establishing Veterans benefits and the Veterans Administration facilities are also important.

State laws which affect long term health care include those on the licensure and certification of facilities, the State Medicaid Plan (state rules governing the coverage and administration of Medicaid), state and county public health programs, the state Certificate of Need program, and the licensure and certification of professionals. County funding of mental health services and services for the mentally retarded is also established by Iowa law.

It can be said that these federal and state acts pursue four basic policies. In some way they all have provisions to ensure quality of services. Some address the quality of facilities, others, the quality of providers. Licensing and certification exists for facilities and providers through state laws on practice and federal conditions of participation in Medicare and Medicaid. Care review committees are also mandated through the federal reimbursement programs. Standards for patient care, that is, protocols for treatment, exist in federal and state regulations. Also, most programs and acts are charged with ensuring the accountability of providers and program officials for the way money is spent.

Certificate of need was established to guide the distribution of facilities (capital investment), and control the costs associated with individual facilities, and control the total capacity of facilities in an area. An explicit purpose of Medicare, Medicaid, The Older Americans Act, and Title XX is to make health care accessible to the poor and elderly by paying for services. Finally, there are federal and state programs which directly provide or contract for specific services. These policies or policy goals and associated acts and programs are summarized in the chart below.

Statewide Policies and Programs

POLICY	FEDERAL OR STATE ACT/PROGRAM WITH RESPONSIBILITY AND/OR AUTHORITY
Quality Assurance	
- Quality of Care	Medicare, Medicaid, PSRO, State Licensure (Professional Boards), Health Planning
- Quality of Facilities	Medicare, Medicaid, State Licensure, County and Municipal Codes
- Quality of Providers	State Licensure (Professional Boards), Medicare, Medicaid
Availability of Services	Health Planning - Certificate of Need, Title XX, Older Americans Act, State Direct Services, Substance Abuse, V.A.
Access to Health Care	Medicare, Medicaid, Title XX, Older Americans Act
Cost of Care	
- Cost Containment	All Acts in Some Ways
- Control of Capital Investment	Certificate of Need - Health Planning

These policies are implemented through the above state and federal programs which set regulations and administer provisions of the laws and

The analysis of programs which follow are intended to examine shortcomings in pursuing the policies. Specific objectives are then written to correct these shortcomings.

The analysis, goals and objectives established by Iowa's Health Systems Agencies are also expressions of policies and as such are a basis for the state goals. Their work is summarized under each planning issue and in the problem statements.

Before moving into the description of programs and problems, there is one additional set of policies which should be examined, those of health planning. While health planning has certain direct responsibilites regarding the policies or mandates above, its role as a new actor in the health care system is to analyze and synthesize statewide policies and goals.

In pursuing this role, Iowa's three health systems agencies and the State Office for Health Planning and Development have been discussing and examining existing statewide policies toward long term health care. Planners from all four agencies have been working to clarify those policies and the basic assumptions of health planning. These discussions have resulted in several statements of policy assumptions.

The agency staff have agreed on the basic thrust of each statement, though each have individual reservations and caveats. (14) Staff have only begun to discuss how the agencies are to act on these assumptions. Nonetheless, they are a good step in more clearly establishing our common concerns and responsibilities. The purpose in publishing them now is to stimulate more public discussion and action. It is not our purpose to establish the health planning equivalent of the Magna Charta.

Some of the statements are self-explanatory and some are presented with a summary of the reasoning that went into them. Additional explanation and exposition is contained in the problem and goal statements.

Health Planning Policy Assumptions

1. *A complete range of long term health care services and settings will be available, such that individuals can select the services and setting which allows them a maximum range of independent action. At a minimum each person should have available to them:*

   - *comprehensive assessment and coordination services*
   - *in-home/home centered health care*
   - *residential personal care*
   - *intermediate inpatient nursing care*
   - *skilled inpatient nursing care.*

Such services will be available for both populations with general nursing and health care needs and those with specialized needs, such as the mentally retarded.

This assumption speaks to health planning's responsibility for the availability of service. It focuses attention on a basic core of services. Assessment and coordination services is perhaps the only unfamiliar category. It includes health and functional assessment,

discharge planning, service need assessment and service coordination, as described in the section above. These services would not necessarily be free-standing, of course. We are recognizing them to promote their development within existing organizations, to emphasize these functions to existing providers, as well as to encourage experiments in distinct services.

2. *Every person should have financial and geographic access to the health care services and setting which will allow them a maximum range of independent action, recognizing that in some areas, some services may not be economical and alternative settings may be limited.*

Maximizing independent action here means supporting a person's activities rather than supplanting them. It means a setting in which there are as few barriers to individual actions as possible. This is the obverse of the idea of least restrictive environment. "Independence" was selected because it is a concept which has measurable clinical and legal aspects, while "least restrictive" is more vague and stated negatively.

The idea that services and settings may be limited in some areas simply faces economic reality and forces thought on trade-offs and more careful planning to maximize services.

3. *Public and private reimbursement should pay for services regardless of the setting, and should incorporate other state level policies. Public reimbursement should encourage the appropriate, least intensive use of services which will result in a lowest total cost rather than a lowest cost to one unit of government.*

4. *Health planning will seek to improve the functioning of the long term health care market through selective use of all strategies available, recognizing the inherent limits on competition which exist in the nature of the market. These strategies will include*

   - *support of alternative and substitute services*
   - *regulation of capital investment (Certificate of Need)*
   - *coordination of planning, quality assurance and reimbursement policy*
   - *guiding the choices of consumers in selecting appropriate services.*

This statement was initially a response to questions concerning the need for regulating the construction of nursing homes. It was suggested that certificate of need regulation enfranchised providers and was driving prices up and quality down and should be eliminated.

It was later agreed that while current C.O.N. rules may be contributing to these problems there were many other causes. The positive contribution of C.O.N. to overall cost containment and quality was also recognized.

It was agreed that there is an appropriate role for controls on capital expenditures in limiting the quantity of services available. It was seen as providing leverage and a brake while the state reinforces utilization controls, changes reimbursement policies, strengthens quality assurance, and assesses private use of services.

It was agreed that C.O.N. control should be reduced as more control was gained over other factors affecting cost and quality. As mentioned above these factors and suggested changes are:

- stronger public utilization review (P.S.R.O.)
- more effective quality assurance-licensure, management information (planning system)
- a revised reimbursement system which provides full accountability, eliminates excess profits, and pays for all allowable costs completely
- some mechanism for assessing and guiding private use of services.

At first there was some contention over an appropriate and feasible public stance toward the private use of services. It was suggested that we eschew any statement other than that those able to pay may elect an inappropriate level or type of care. It was said that present policy restricts services and penalizes those seeking appropriate care when nursing beds are used inappropriately.

It was then argued that while it is true those willing to pay for a more intensive level of care will always be able to get it (and not likely that government will be given authority to forcefully determine otherwise), health planning should work to reduce these inappropriate placements and not build into policy an assumption of present levels of "misuse". It was noted that there would be several detrimental public effects which would follow from such an assumption.

First, the resources of private pay patients are more quickly exhausted in more intensive levels of care. They must then fall back on Medicaid or Medicare, or if they require only personal care, the very limited assistance available through S.S.I. and Iowa's state supplemental payments for residential care.

Second, a person placed in a nursing home who requires only personal support in a residential setting is not as much a "problem" as other residents. They may not receive the attention and stimulation needed to maintain their status, and may deteriorate to a point where they do require that level of health care.

This discussion of public and private use led directly to the following statement of policy assumption.

5. *Health planning and reimbursement programs should promote the appropriate use of services and resources by publicly and privately supported persons.*

6. *All long term health care policy should be coordinated and a common base of assumptions and information developed. All programs dealing with long term health care should operate from these assumptions and this common information.*

This final assumption is the simplest one, but the most important. It is the lynch-pin of all the others. It points out the fact that current policies toward long term care are sometimes contradictory, unclear and based on different information. The coordination of policy is necessary if any one program is to have its intended effect.

VI. Private Policies on Long Term Health Care

A. Health Insurance

At present there is very little private, third party coverage of long term health care. Some major insurers do cover in-home nursing care. Little information has been gathered on the extent or use of these benefits. It is possible that some large employers and unions have added these benefits.

The attitude of private insurers has been that use of long term health care has been difficult to predict and evaluate. Some argue that the use of services such as homemaker-home health aides is subject to wide discrepancies according to the personal taste and values of individuals.

B. Quality Assurance and Accountability

There are two ways in which quality assurance and accountability are carried out privately; peer accreditation and peer review. Peer accreditation is carried out by organizations such as the Joint Committee on the Accreditation of Hospitals (JCAH) which surveys and inspects both hospitals and nursing homes according to its own criteria. Peer review occurs within health care organizations and within professional organizations of providers. Both hospital tissue committees and the ethics and practice committees of medical associations are examples of peer review.

Peer accreditation is becoming less important while peer review is being strengthened. Recent studies have questioned the effectiveness of accreditation and the relevancy of JCAH standards. (15) One study by Roemer, Moustafa and Hopkins found little difference in the quality of care provided by JCAH accredited and non-accredited hospitals. (16)

Peer review, such as the quality assurance studies being conducted by Professional Service Review Organizations, is being expanded. A policy is being followed of setting public standards or goals in legislation and regulation, and relying on private/quasi-governmental entities such as the PSROs to apply them.

C. Cost of Care

There is currently no organized effort by the nursing home industry or other long term care providers to control costs similar to the voluntary effort (V.E.) of the hospital industry. It should be noted that nursing homes and other providers are much more limited by reimbursement programs than are hospitals, and that lately the total percentage increase in expenditures for long term care appears to be less than with hospitals. In Iowa, nursing homes are limited by an absolute cost-cap on the per diem rate, a constraint which does not exist for hospitals.

VII. Statewide Programs to Implement Policies

A. Public Payments

Assuring that all citizens have access to needed health care is carried out mainly through programs of public payments. In Iowa

these payments include:

- Medicaid, administered by the Department of Social Services
- State Supplement for Residential Care, (also through D.S.S.)
- Medicare, with Blue Cross-Blue Shield as fiscal intermediary
- county payments for mental health care (Iowa Code, Ch. 229.42, 333.11(11), 230.23, 222.76 and others)
- county support for services to the mentally retarded (Iowa Code, Ch. 222-230, various sections).

Payments are distinguished from direct services in that no service contract is established. Existing providers are reimbursed for services delivered.

In the future, national health insurance may be the major reimbursement program, if long term health care is included in coverage. Given the confusing and ill-fitting coverage of the various programs today, national health insurance could contribute to a more rational and effective policy.

B. Quality Assurance and Accountability

The licensure of facilities includes hospitals, nursing homes, residential care facilities and all health care facilities as defined in chapter 135 of the Iowa Code. This chapter of the Code is administered by the State Health Department, Facilities Licensure Division.

The licensure and monitoring of individual providers is also carried out through the State Department of Health professional boards. Licenses are required for the practice of medicine, surgery, osteopathy, osteopathic medicine and surgery, psychology, chiropractic, physical therapy, nursing, dentistry, dental hygiene, optomotry, speech pathology, audiology, and other professions with health implications such as mortuary science. (Iowa Code, Ch. 147.2)

The certification of facilities for reimbursement is the responsibility of the Department of Social Services, though the actual surveys for compliance with Medicaid and Medicare rules are performed by the Department of Health.

Advocacy of patient's or consumer's rights is carried on by both the Health Department and the Commission on Aging. The Health Department investigates individual complaints of poor care and rule violations. The Commission on Aging, through the Nursing Home Ombudsman, is to provide general counsel and assistance to persons with problems in finding care or with the quality of care. The Commission and the Department of Health are discussing ways of combining their efforts.

Review of the actual services provided is done by the Health Department in reviewing complaints and through their regular surveys. The Department of Social Services monitors the social services provided through Title XX contract and other special funding. The Iowa Foundation For Medical Care (Iowa's PRSO) conducts concurrent quality assurance reviews of specific treatments and services within facilities.

Other private peer review is conducted by the societies associated with each licensed profession.

C. Cost Containment and Control of Capital Expenditures

Certificate of Need and 1122 review (section 1122 of the Social Security Act) of all new institutional health care services are the most obvious and direct public controls of investment and expenditures. Both reviews are conducted by the State Health Department, Office for Health Planning and Development. Their specific provisions are detailed in the appendix.

Medicaid cost ceilings on services and per diems also serve cost containment. There is an absolute per diem ceiling for nursing homes based on the 74th percentile of all homes' audited costs, based on an audit six months to one year prior. Medicare sets payment limits on skilled nursing reimbursement and home nursing, and the intermediaries audit all costs (reimbursing 74% of skilled nursing charges in 1976 and 96% of home health charges in 1979 in Iowa).(17)

A variety of efforts at expanding the range of services available can be seen as pursuing a goal of cost containment. They are based on the idea that given the opportunity people will choose less intensive services and that these will be less costly. Included are the direct support of home health care and support services as outlined below.

Rate regulation is one possible measure now being investigated by the State Department of Health. A major study, mandated by the Iowa legislature, is examining whether Iowa should enact regulation to control the rates charged by hospitals, mursing homes and other providers. It is examining the current rate structure, facility finances, and profit patterns. A report is due by July of 1980.

D. Direct Public Provision of Services

There are three types of direct services provided with public money in Iowa. These are

- consultation, assessment and referals
- direct treatment or care
- the education of professionals.

Consultation, assessment and referrals are provided by the Department of Social Services through county client services and case management. The State Health Department provides nursing and other consultation to the county health departments. The counties in turn provide screening and physical assessment and referrals to other providers. Area Agencies on Aging also support screening and act as referral centers. The Iowa Foundation for Medical Care as Iowa's PSRO performs individual assessments each time it certifies a person's need for a type of care. It is informally involved in referrals when it is determined that someone is inappropriately placed.

Direct care is provided by the cities, counties and state as follows. (See the section on availability in "Problem Statements in Long Term Health Care" for more description and data.)

1. counties
   a) direct support of Community Mental Health Centers

b) direct support and control of county hospitals
c) direct support and control of county care facilities
d) service contracts for varying services
e) direct support and control of county health departments (home health care)

2. cities
a) direct support and control of city health departments
b) some service contracts

3. state
a) State Hospital Schools (Woodward, Glenwood)
b) Marshalltown Veterans Home
c) Department of Health - Appropriations for local home health care
d) Department of Social Services Title XX contracts
e) The Iowa Model Gerontology Project (comprehensive health services) - University of Iowa
f) State Mental Health Institutes at Clarinda, Cherokee, Independence and Mt. Pleasant.
g) State Services for Crippled Children (University of Iowa)

The state is also intimately involved with the education of health care professionals at the University of Iowa and the Community Colleges. The state supports the education of physicians, pharmacists, dentists, nurses, speech pathologists, audiologists, public health officials, physical therapists and various supporting personnel.

E. Health Planning

Health Planning in Iowa is carried out by the State Health Department and the Midlands, Iowa and Illowa Health Systems Agencies. The purposes and priorities of health planning are described in the introduction to this plan.

F. Private Insurance and Professional Organizations

As introduced above, private insurers and professional organizations are becoming more involved in the discussion and pursuit of public goals and policies. The specific provisions of different insurance companies have not been investigated and catalogued. Problems which can be addressed through private insurance are included in sections below. The involvement and positions of professional societies are also described along with problems in health care.

VIII. Problem Statements In Health Status

- Introduction -

The status problems here were selected mainly on the basis of priorities established in the 1980 State Health Plan. An examination of new data on the incidence of chronic conditions and limitations in activity due to chronic conditions nationwide resulted in adding diabetes and arthritis for consideration in relation to long term care. Subtopics were added under mental disorders. Two new categories of status problems are used in the 1981 plan - "chronic degenerative diseases" and "diseases associated with lifestyle".

A new section on assessment of functional abilities was also added, consolidating discussion in the 1980 state plan and Health Systems Plans. The measurement of functional abilities is suggested as a central measure of status for long term health care, one that could and should be used to evaluate the effectiveness of programs and services. Using measures of functional abilities and the concept of independence for policy decisions is contrasted with the use of information on the incidence of specific conditions and chronic complications in promoting specific services and treatments.

The purpose of this section is to present definitions of status problems. The incidence or prevalence of problems and the significance of chronic complications are discussed. Existing and possible ways of reducing the problem are introduced. Alternatives are discussed in more detail in the section on status goals.

A. 1. Arthritis

Arthritis is a general term for inflamation of a joint usually accompanied by pain and often by changes in structure. The two most common chronic types are osteo and rheumatoid arthritis.

Osteoarthritis particularly involves joints bearing weight. It is characterized by destruction of articular cartilage, overgrowth of bone with lipping and spur formation, and impaired function. It is the most common form of arthritis, comprising over half of all cases. (National Arthritis Foundation estimate for 1976.)

Rheumatoid arthritis attacks all joints and related structures. The inflamation tends to be chronic and often results in crippling deformities. Its cause is unknown. Rheumatoid arthritis amounts to about 20% of all cases. (National Arthritis Foundation estimate for 1976.)

Arthritis and "rheumatism" are the number one cause of limitations of activity in the noninstitutionalized population nationally, accounting for about 17% of all degrees of limitations. (See Table Two.) Nationally, over four percent of nursing home patients have arthritis as a primary diagnosis, and one-fourth of nursing home residents nationally have arthritis as an impairing chronic condition. (See Table One.)

Approximately 14% of the U.S. population has some form of arthritis. (National Arthritis Foundation estimate for 1976.) Based on the breakdown above, about 10% of the general population has a chronic degenerative form of arthritis. (18) Treatment of arthritis involves reducing symptoms since no cures are known. Physical therapy and orthopedic measures are most

commonly employed. Dietary regimens, vitamin therapy, blood transfusions and use of hormones have all been tried with varying success.

Pain and muscle spasms are relieved through bed rest, application of heat and analgesics. Complete bed rest is indicated in acute stages. Personal hygiene is a concern because of poor circulation and limitation of movement. (Taber, 1977)

Arthritis is mentioned in the 1980 Illowa Health Systems Plan, p. 79, as the second most prevalent chronic condition in their area, based on 1973 national estimates. As noted above, arthritis is even more significant in the 1976 national survey.

The 1976 National Health Survey shows that the incidence of arthritis increased from 8.7 to 9.5 per 1,000 persons between 1969 and 1976. (19) Prevalence increased from 92.9 per 1,000 to 116.7 during the same period. Both increases are statistically significant. Extrapolation gives an incidence of 9.9 and a prevalence of 130.3 for 1980.

The 1980 State Health Plan ranked arthritis 14th in priority because Iowa hospital discharges for arthritis were lower than national rates. This may simply reflect differences in preferred treatment, however, with Iowa physicians choosing surgery less often.

A. 2. Diabetes

Diabetes mellitus is a chronic and incurable disease caused by failure of the beta cells of the pancreas to secrete adequate amounts of insulin. (Taber, 1977) Two basic types of diabetes are identified. "Juvenile-onset" occurs prior to age 15 and is quite difficult to regulate. "Adult-onset" may occur any time after 15 but most often after 35 years of age. Adult onset has gradual appearance of symptoms and is more easily regulated.

Basic treatment consists of diet, insulin and exercise. Screening and identification can be done through urinalysis for sugar, postprandial blood glucose test, and an oral glucose tolerance test. Since obesity is associated with about 80% of diabetes cases, this can be used as a simple screening factor. (20)

There are many chronic complications from diabetes. These include diabetic acidosis, low resistance to infections (especially those involving extremities), increase in incidence of toxemia in pregnancy and in cardiovascular disorders, increase in electrolyte imbalances, and an increase in eye disorders. It is the leading cause of new cases of blindness. A recent Surgeon General's report on health promotion and disease prevention notes that diabetics have more severe atherosclerosis and twice as many heart attacks and strokes as nondiabetics the same age. The risk of atherosclerotic disease is five times greater for diabetic women than other women. (21) Diabetics are also more likely to be overweight and hypertensive.

Nationally the incidence of diabetes is estimated at 50 per 1,000 population. This rate can be assumed to hold for Iowa. In Iowa the overall mortality rate was 15.7 deaths per 1,000 population in 1978, making diabetes the seventh leading cause of death in Iowa. Morbidity (measured as days of hospital care) has been estimated in Iowa at 91 days per 100,000 under 45 years old, and 504 days over 45. This compares with 96 and 585 nationally

in 1972. Diabetes was ranked ninth as a cause of morbidity and mortality in the appendix to the 1980 State Health Plan, but was not included as a priority in the plan.

The mortality rates above obviously understate the total illness and disability associated with diabetes since the complication being treated will most often be cited as cause of admission. Another measure, limitation in activity, shows diabetes as being the seventh leading cause of all limitations in activity and the fourth largest cause of a person being completely unable to carry on a major activity among the noninstitutionalized population. (See Table Two.)

The National Nursing Home Survey for 1977 shows 5.5% of all residents as having diabetes as a primary diagnosis, but 14.5% as having diabetes as a chronic condition. Again, diabetes would be a complicating or causative factor in other conditions.

Diabetes has been recognized as a status problem by the Health Planning Council of the Midlands. Goal 3.330 in the 1980 Health Systems Plan calls for a decrease in the area mortality rate of 16.1 deaths per 100,000 population (1970-74 average). This rate may already be lower in their HSA, as the 1978 Iowa average was 15.7. No objective or actions were developed.

Effective management of diabetes and associated chronic complications depends on three things, namely,

1. Early identification and diagnosis through screening and follow-up;
2. The education of the diabetic in proper diet, exercise, medication and personal care; and,
3. The education of medical and nursing professionals in the management of diabetes.

The National Commission on Diabetes estimated that 5% of all people have diabetes, but only 3% are diagnosed and under medical care. They also estimate that 3% will develop diabetes each year, doubling the number of diabetics every 15 years. (American Diabetes Association pamphlet - "Facts About Diabetes)

A. 3. Hypertension

Hypertension, or elevated blood pressure, is a condition which has been linked to many life threatening and debilitating diseases, including coronary artery disease and cerebral vascular disease. The primary cause is vasoconstriction or narrowing of blood vessels.

A cause of hypertension can be identified in only 10% of all cases. There are definite curative therapies for this 10%, however. These causes include coarctation of the aorta, hyperthyrodism and certain renal diseases. The remaining 90% of hypertension must be regulated through diet, exercise, and medication. (Taber, 1977)

Control of hypertension is important because of eventual chronic and acute complications and because it is the fifth leading cause of limitations in activity nationally. Hypertension without heart involvement is the fifth leading cause of limitations in activity nationally. (See Table Two.) In 1977, deaths from hypertension in Iowa were 21% greater than the national

rate, 11 and 9 deaths per 100,000 persons respectively, though morbidity (hospital discharges) was lower. (See Table 9 - 1980 State Health Plan, Appendix II.) In spite of lower morbidity and the unknown significance of the mortality figures (due to the small numbers of cases) hypertension must be considered a disease with significance for long term health care because of its link to chronic complications and limitations in activity.

The Iowa HSA recognized hypertension as one of two priority chronic conditions, with heart disese. They are discussed together, with hypertension being considered a major cardiovascular disease. Their plan notes that "...hypertension can lead to congestive heart failure, cerebrovascular diseases and arteriosclerosis...hypertension is associated with many of the same risk factors as heart disease..." (Iowa 1980 HSP, p. 71) The discussion which follows focuses on risk factors, screening and treatment.

Risk factors and screening are discussed in the Prevention chapter of this State Health Plan. The focus here is on the management of essential hypertension without major heart involvement. That is, hypertension is considered a debilitating condition in itself, and as a precipitating factor in acute and chronic conditions.

Along these lines the 1980 Iowa HSP notes that only 41% of identified hypertensive individuals were under adequate therapy. 27% were under inadequate therapy and 32% were not under treatment at all. (pp. 76-77) Education and promotion of follow-up care after screening are suggested as primary means to reduce this problem. Both providers and the general public might be approached, since so many different providers perform blood pressure tests.

A. 4. Organic Brain Syndromes

Organic brain syndromes are a large group of acute and chronic disorders which affect cerebral function, impairing consciousness, orientation, memory, intellect, judgement and thought content. Senile and presenile dementia are the two chronic syndromes most common, other than impairment due to substance abuse.

Presenile dementia is defined as irrecoverable deterioration of mental functions beginning in middle age, usually resulting from cerebral arteriosclerosis. Senile dementia, the gradual irrecoverable deterioration of function with increasing age (senescence) is the main concern here.

Chronic brain syndrome is the primary diagnosis of approximately 7% of all nursing home patients. (See Table One.) Functional impairments which might be linked to senile dementia are reported for about 30%. One third of all nursing home residents have "senility" recorded as a chronic condition, separate from chronic brain syndromes which were reported for a quarter of all residents. (See Table One.)

There is no exact test or procedure available to determine what is due to cerebral deterioration, the actual death of cells, and what is due to other mental disorders or lack of stimulation. Cortical stem atrophy is sometimes cited as a sign of senile dementia though severe atrophy has been reported in middle aged individuals with no observable loss of function or personality change.

Beyond identifying specific toxic or disease etiology,the only certain method for determining whether a loss of mental function is permanent is to examine the persons's record and to interview them and persons close to them over the preceding years. A history of gradual deterioration without specific cause, and present evidence of poor memory of recent events, poor orientation, etc., would be the best indication of the permanence of the condition.

It is important that persons not be labeled as "senile" without such evidence and a diagnosis. Senility can be a self-fulfilling prophecy if all distrubing actions and problems are put down by providers and family to "old age."

An accurate diagnosis and evaluation will also point out those cases where the onset of symptoms is more sudden or more specialized. Such cases may be amenable to treatment.

B. Diseases Associated with Lifestyle Which Have Chronic Complications

1. Heart and Circulatory Disease

Heart and circulatory disease is recognized by all of Iowa's health plans as the most frequent cause of death and disability in our state and the nation. (22) It is a broad category of diseases affecting the heart and entire circulatory system including stroke, arteriosclerosis and atherosclerosis. While the causes are not known for most conditions, the risk factors and subsequent treatment are strongly related to lifestyle.

Lack of exercise, a diet high in saturated fats, obesity, high intake of alcohol and use of tobacco, hypertension and stress have all been related to heart and circulatory disease.

Though there are multiple risk factors, lifestyle can be a contributing influence with all. Thus, there is good sense to concentrating on lifestyle as a cause. An additional reason for this concentration, at least in this section, is that other factors such as stress and diabetes are discussed elsewhere in relation to heart and circulatory disease.

The chronic complications of heart and circulatory disease are great. It is the most frequent primary diagnosis of nursing home patients, being reported for 40% of all residents. It is the most common chronic condition of all residents, affecting nearly half. (See Table One.) Among the noninstitutionalized population it is the second leading cause of all limitations of activity and the leading cause of complete inability to carry on a major activity. (See Table Two.)

The challenge in dealing with these diseases is both prevention and rehabilitation. Our medical technology has progressed where we are able to treat acute episodes and keep persons alive, though at a great cost. (See Preventive Services and Acute Care Chapters.) The restoration and maintenance of functions must begin whenever these diseases are diagnosed, whether in a hospital following an acute episode, in the home, or in nursing homes. Coordination of effort between providers is essential.

C. Cancer

Cancer is not usually thought of as a chronic condition, yet the treatment

of some cancers can extend for months and years, and the side effects of such treatments can be debilitating. It should be considered that coping with the daily health complications of chemotherapy and nuclear therapy is a matter of habilitation and rehabilitation, of adjustment and readjustment.

Our current concern with cancer is in developing and delivering acute care services, usually half-way measures but with some cures or at least prolonged remissions. Some attention should be given to counseling and habilitation services.

Hospice care of persons with terminal diseases can offer a great deal in improving the quality of a cancer victim's life. When the progress of cancer can be accurately predicted, usually in the later stages, it is entirely appropriate to bring together those people--counselors, nurses, physicians and volunteers, who can do the most to improve the dying person's spirit and ease their death. The mental and physical health of family members is also improved as they are relieved of some of the physical burdens of caring for the person and are better able to cope with grief.

D. Accidents

Little can be said at this time about the contribution of long term care to the treatment of accidental injury. A certain small percentage of nursing home patients have fractures and accidents as a primary diagnosis. It is not known whether treatment of these patients is a particular problem for either patient or provider. For example, do elderly who suffer a fall and fracture, enter a nursing home and lose functional abilities while there for what was to have been a short stay? This could be an area of research.

Possible state concerns could be coordination between EMS providers, hospitals, and long term care providers to ensure proper follow-up care for those accident victims at risk from chronic complications and long term loss of function. The goals would be stated in terms of reducing chronic complications and loss of function.

A somewhat related HSA goal is found in the Iowa HSP concerning reduced incidence of complications from chronic degenerative conditions in later life.

A possible concern is the number of seriously disabled persons who survive auto and other accidents. The incidence of severe physical handicaps due to accidents should be investigated more fully.

E. Mental Disorders Other Than Organic Brain Syndromes

The extent of chronic mental disorders in Iowa is not known. Status problems have previously been defined by an almost complete lack of services other than long term institutionalization in State Mental Healh Institutes and County Homes. We would like to begin examining specific conditions such as schizophrenia and depression, however. These can be long term status problems, with mild to severe limitation of functional abilities, and should be studied. Because of limited data and time only depression and schizophrenia are addressed as a status concern this year.

The 1977 National Health Survey shows depression to be the second most common reported impairment among nursing home residents, affecting just

over one third of all residents. Agitation and hyperactivity are reported for a third, and aggressive behavior for 17%. (See Table One.) Preliminary data from the Scott County Gerontology project indicates that mental health is a problem for a significant number of elderly.

The treatment of depression or any mental disorder among nursing home residents and the elderly in general is virtually nonexistent. Little thought is given to providing psychological or psychiatric services to nursing home residents. In 1979 only 1.8% of Community Mental Health Center clients and 4.9% of Mental Health Institute residents were 65 years of age or older. (23) The elderly are particularly at risk from depression because of the major life changes which they experience, such as retirement, reduction in income, loss of spouse, loss of friends, and impaired health. (See Illowa HSP p. 231 and Iowa HSP pp. 31-32.) Here, normal grief can lead to a state of chronic depression.

Services for the elderly are a priority in three of the four Community Mental Health Center regions in 1980. (See the 1979/80 Progress Report - State of Iowa Plan For Mental Health Services, pp. 36, 50, and 61.) They will be a target population for some time. Several projects are now being planned (see subsequent section describing the availability of services).

Schizophrenia has been informally identified as the most common cause chronic mental health problem by the Iowa Mental Health Authority and CMHCs (based on a conversation with the chief planner of Mental Health Authority). There is some concensus that treatment of schizophrenia takes most of the CMHCS resources, and that the community support programs will focus on it. There is currently no hard definition of chronic mental illness which can be used in gathering data.

Preliminary data from the Davenport Model Gerontology Project indicates that 10% of the elderly they see may be classified as having chronic mental health problems.

The Iowa HSP's status goals relating to mental health focus on ability to cope with life experiences. (Iowa 1980 HSP, pp. 30-33) The Midland's HSP does not address mental health status as such, but does discuss problems in measuring the effect of mental health services, follow-up care, and accountability of programs and providers.

The State Mental Health Authority is designing a program evaluation system which might be adapted for further study and goals, such as studies of the effects of depression and other disorders. These concepts are:

- self care
- adjustment
- coping with stress
- individual living skills
- interpersonal relations

The system is to gather information on the use of services by at risk populations and evaluate the appropriateness, adequacy and quality of care. Level of functioning is to be assessed on a seven point scale. (24)

F. Developmental Disabilities

The term develpmental disability covers a number of chronic handicapping conditions which appear early in life, before age 22 in the definition used by the Developmental Disabilities Progaram, PL 95-602. This program is federally funded and in Iowa is administered by a division of the Office of Programming and Planning.

Conditions which are prevalent in, or characteristic of the developmentally disabled are:

1. mental retardation
2. hearing impairments
3. speech impairments
4. visual impairments
5. serious emotional disturbances
6. orthopedic impairments
7. generally impaired health
8. learning disabilities

(adapted from a list appearing in the 1980 Developmental Disabilities Plan, p. 13)

By far the most prevalent condition is mental retardation, followed by hearing impairments, visual impairments, orthopedic handicaps, emotional disturbances and speech impairments. Moderate and severe or profound retardation affects about .4% of all persons. Mild retardation affects about 2.6% of the general population. Mild retardation is defined as an I.Q. of from 52-67 or 55-69, depending the scale used, moderate retardation from 36-51 or 40-54, and severe and profound from below 20 to 35 or 39, depending on the scale used. The mentally retarded are the only delopmentally disabled population addressed in this year's State Health Plan. Others will be addressed in subsequent plans.

The causes of retardation include genetic defects, accidents, abnormal fetal development due to alcohol or other drug use by the mother, and abnormal fetal development due to diseases such as rubeola and rubella contracted by the mother during pregnancy. No attempt has been made in Iowa to separate these causes. Such information might allow development of preventive goals and objectives.

Iowa HSAs have various goals regarding reduction of conditions which cause retardation, but no estimate of the retardation prevented. (See Iowa HSP pp. 10-18, 16-21, 49-59, 105-116; Midlands HSP pp. 3-118 to 3-120, 4-161 to 4-183; Illowa HSP pp. 84-87, 98).

The Iowa HSP contains a chapter on birth defects and developmental disabilities in which they cite figures from the Governor's Planning Council on Developmental Disabilities and the state D.D. program's 1979 Plans, on the degree of disability associated with various conditions. The number of individuals limited in specific categories of function is also listed (Iowa HSP pp. 106-107). Their status goals focus on reducing stress in families of developmentally disabled persons. Service goals call for increased support of families through respite care, in-home respite care, and increased diagnosis and evaluation services.

The 1980 Developmental Disabilities Plan describes seven aspects of functions in relation to the disabled. These aspects, called major life activities, are:

- self care
- receptive and expressive language
- learning
- mobility
- self-direction
- capacity for independent living
- economic self-sufficiency

The numbers of persons with limitations in these activities are displayed in Table five. It is not clear that any one of these areas should be made a priority over others since the smaller incidences are in areas which more severely restrict a person's life, and which add up to or are a function of the more general categories of abilities such as capacity for independent living. Mobility and capacity for self care obviously affect capacity for independent living.

The 1980 Developmental Disabilies plan emphasizes self care and capacity for independent living through objectives for developing a family subsidy support program and respite care. The first project is to provide subsidies to families that maintain their developmentally children at home. The respite care project is to develop eight sites to provide temporary relief care for families maintaining developmentally disabled at home. (See pp. 245 A and B)

G. Substance Abuse

The effect of substance abuse and misuse and some long term care implications has been discussed under both organic brain syndromes and developmental disabilities. The major status concerns have been indirectly related, that is, they have been conditions which sometimes cause chronic disease and disability.

The general chronic deterioration caused by alcoholism and other drug abuse has been recognized in all of Iowa's health care plans. Substance abuse is a contributing factor to accidents, mental health problems, and crime. (25) The cost of substance abuse in lives lost and disability cannot be measured exactly, but it can hardly be understated. The 1979-80 Iowa Comprehensive State Plan for Substance abuse estimates that 6% of the State's working population abuse alcohol or are alcoholics (p. 37). The cost of absenteeism, decreased productivity and grievance procedures is estimated at three hundred and ninteen million dollars.

The health care treatment of substance abuse is generally acute detoxification or treatment of specific acute complications such as cirrhosis, hepatitis, and anemia.

Long term treatment available includes residential and intermediate facilities which are private, non-profit community organizations. They receive funds from a variety of grants, many administered by the Department of Substance Abuse as service contracts. They also receive United Way contributions, county money (25% of treatment service costs) client fees and third party reimbursement.

Discussion of status in the State Substance Abuse Plan is limited to the incidence of the use and abuse of specific drugs. There is analysis of the characteristics of clients admitted to treatment programs, but data is translated into incidence or risk factors only for alcohol.

One status measure which has implications for long term health care is poly-drug abuse. Sixty-five percent of all persons admitted to drug treatment programs in 1978 were using three or more substances. (26) This fact, combined with the low treatment rates of women and the elderly is a matter of concern. Only 16.4% of clients in 1978 were women and only 7.8% were older than 31 years of age. (27)

Use of alcohol and multiple prescription drugs by pregnant women can have many consequences, including fetal alcohol syndrome, orthopedic deformities, mental retardation, and milder complications such as low birth weight.

It is generally believed that the elderly use more prescription drugs than any other population, though no definite data exists. One sub-group of elderly those in nursing homes, receive a large number of drugs. A study by Dr. Yong Lee (Nursing Homes in Iowa-Analysis of Selected Performance Standards, Iowa State Department of Health, Feb. 1979) shows that in an average nursing home of 69 beds, approximately 400 medications would be administered daily.

Over-medication and mis-medication are frequently mentioned by care reviewers as serious problems. Continually refilling prescriptions and administering drugs without review by a pharmacist or a physician of the person's continuing need was brought up as a problem by the 1981 State Health Plan Development Task Force on Long Term Care.

There is currently no study of prescription patterns, use of drugs, or professional involvement in drug therapy for the elderly or chronically ill in Iowa.

Professional consultation, management protocols and consumer education could contribute to reducing these problems. The Iowa Pharmacy Association, Iowa Medical Society state schools of pharmacy, the Iowa Foundation for Medical Care, state nursing home associations, State Department of Substance Abuse, and the State Department of Health could all contribute to potential goals.

H. Dental Health

There is very little data on the incidence of dental health problems which require long term health care or on limitations in activity and chronic complications caused by dental health problems. The Iowa and Illowa HSP cite 1971 national survey data (28) which shows that gingivitis and other forms of gum disease (peridontal disease) begins early, occuring in the majority of children by age 13. Approximately 78% of all adults have some form of peridontal disease. Iowa presents a goal to improve oral health and an objective to decrease periodontal disease (not quantified). (Iowa 1980 HSP pp. 22-24) Illowa calls for reducing the number of people loosing all their teeth. (Illowa HSP pp. 90-92)

Other evidence indicates that loss of all teeth (edentulousness) and dental health in general is a serious problem among those residing in nursing homes. The 1977 National Survey of Nursing Homes shows that a lack of dentures is

the single most frequent functional impairment, affecting 37% of all residents. A 1979 survey of Iowa nursing homes and subsequent report by the Iowa College of Dentistry, Department of Community Dentistry (29) concluded that:

- over half of all facilities had no identified dental consultants
- three fourths of all residents had no dental treatment in 1978
- nursing home providers were aware of dental needs but they commented that families and residents placed a low priority on dental care
- one third of all facilities had trouble obtaining dental care

These figures indicate poor dental health and a potential improvements through provider, resident, and family education, and expanded services.

I. Hearing, Speech and Visual Impairments

Hearing and visual impairments together are the third most common cause of limitations in activity (Table 2). The significance of this figure for long term health care is not obvious, since the causes are not identified. Perhaps more significant are the figures on the incidence of these functional impairments among nursing home residents (Table 1).

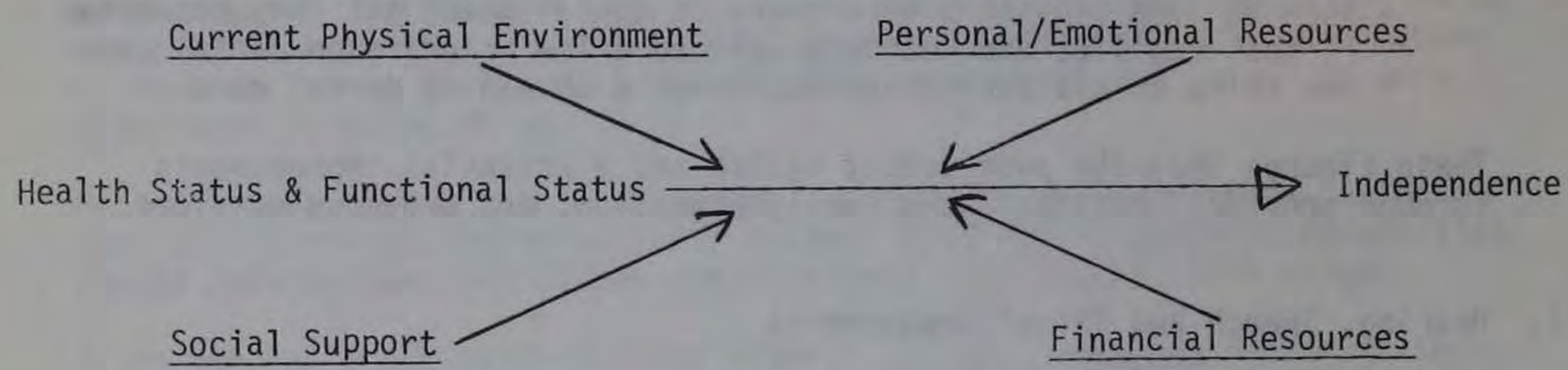
Hearing, speech and visual impairments all affect communication - the ability to take in information and communicate with others. Poor communication can hinder the delivery of care and result in misdiagnosis and poor quality care. While all providers are aware of this, and make individual efforts to overcome communication difficulties, no comparative study or data exists on the degree to which this is consciously recognized in care plans and the success of different approaches to overcoming the problems.

Programs and services which deal with these impairments are not extensively analyzed in this plan update. The state school for the blind at Vinton and the Council Bluffs school for the deaf are not usually thought of as providers of long term health care. Because they do offer habilitative services in a residential setting, and their experience and knowledge would be valuable in analyzing the need for various services, these programs and other private organizations should be recognized in the State Health Plan.

J. Assesment of Functional Abilities

In the beginning of this chapter, the purpose of long term health care was defined in terms of highest functioning and maximum independent action. It is recognized that many variables besides health and functional status set what services will be used and in what settings (independence). The central questions in planning and evaluating long term health care are first, how do health status and functional status interact with these other variables to create a "need", and second does the public sector wish to intervene to alter this need and how can it bring about change.

The chart below summarizes the variables which can affect the services and setting required, defining the independence of action experienced by a person. The "reason" for admission to a nursing home, residential care facility or a home care program is seen as a combination of all factors.



Long term health care must be planned and delivered recognizing these factors. An individual provider must consider each in recommending treatment and in making referrals. General public policy must consider each in allocating resources between programs, services, assessment services, referral or discharge planning, and other services.

Much of the data on health status cited in this section refers to limitations in activity and functional impairments. These data are based on concepts and scales which vary in the detail encompassed, but each attempts to account for the effect of a person's health on how they live.

This is an important kind of evaluation, perhaps the most significant when examining chronic illness. Functional status is distinct from health status. Measures of health status are indicators of the presence, absence or severity of a particular disease. Status measures can indicate the need for and effectiveness of specific treatments. The medical or nursing complications involved with one or more chronic conditions can vary enormously, however. Thus, it is difficult to ascertain needs for services, or what is an appropriate setting, from status data.

Functional status measures can provide a meaningful base of information for planning individual services and comparing the effects of different programs. This will require some standardized data collection and agreement on how different scales fit together, however. The data collection need not be discussed here, but the differences in scales should be.

It was stated above that existing scales differ in detail. This refers to the detail of activity which defines the points of the scale, to the difference between a measure of ability to ambulate and ability to keep a house. Different programs focus on different levels of detail.

The National Nursing Home Survey (30) looks at "activities of daily living." These are six basic, everyday activities, including bathing, continence, dressing, eating, mobility, and toileting. Figure one presents the distinctions between independence and dependence in each category. In addition the survey describes residents according to an index of dependency developed by Katz, (31) in which dependency in one or more categories is ranked as more or less totally dependent. Table six presents some of the analysis performed on this information.

Activities of daily living are the most detailed measures of function. They have been investigated and adapted by various researchers in assessment projects. Some have used them to describe capacity for self care (e.g., Duke University Multi-dimensional Assessment Methodology - Pfieffer OARS).

Activities of daily living do not describe all basic functional abilities, however. Cognitive and emotional abilities or skills are often excluded or presumed. They may be described as part of health status evaluation, but only as the disability associated with disease. Here, the concepts being investigated by the State Mental Health Authority in their program evaluation system may be applicable. "Adjustment" and "emotional stability and stress tolerance" could be added as functional measures and cognitive ability added as a positive health status measure.

A second level of evaluation is found in the Developmental Disabilities Plan and also in the State Mental Health Plan. Categories of activities are defined which are correlated with health and functional status, but which are more global. These more general categories include social and living skills in the Mental Health Plan, and learning, receptive and expressive language, capacity for independent living, and economic self-sufficiency in the Developmental Disabilities Plan.

The callenge in designing long term health care policies and services will be to determine the contribution of health care to improving the more general levels of functioning. To do this health care providers and planners should determine how health care can improve and help maintain the more basic activities. They should then define where the contribution of health care ends, what it cannot do, and the coordination with other providers and services which is necessary. Private providers and public health officials should then advocate for this coordination.

To begin this evaluation, state specific data on the incidence of functional limitations among various populations must be collected. This will require agreement on a basic set of concepts and measures to be used in various programs. It will require a coordinated multi-dimensionl assessment effort.

Some work is now being done which will provide valuable data and experience in designing such an effort. The Scott County Gerontology Model Project on the Assessment of the Functional Dependent Adult has developed an assessment tool and a model for coordination of referrals between agencies and providers. The Iowa State Health Department is reviewing its licensure surveys of long term care facilities and testing new survey instruments which look at the health and functional status of residents and the outcome of care. The lack of such data is and will be the greatest hindrance to designing more effective services and policies.

Current public programs are ambivalent in the way they assess the need for long term care. It has been noted that existing programs treat long term health care as both a medical service and a social service. (See especially Kane and Kane - "Care of the Aged" Science, Vol 200.26, May 1978.)

Medicaid and Title XX have income, age, and social characteristics as eligibility criteria. The use of services is managed by social workers who make referrals and assess eligibility, and by care supervisors who review the care periodically. In Iowa a physician certifies the medical need for care and the case is reviewed by central program staff (social workers and health care professionals) again for medical necessity. (32) (See the "PSRO Formal Plan for Long Term Care Review", Iowa Foundation for Medical Care, September 21, 1978, pp. 1-3.)

It should be noted that the new PSRO plan for review (just cited) does recognize non-medical factors in their general principles. Specific criteria based on these principles are lacking, however. Those criteria which exist for reviewing the need for and quality of care in Medicare and Medicaid are based on exhaustive delineation of tasks and on medical diagnoses.

The point made here is that neither a medical or social services model applies well to long term care or offers an adequate framework of information for administrative control of public programs.

First, nursing home and other long term health services are not purely or primarily medical. Neither are the nursing services offered the same type or under the same control of a health care provider as in a hospital, where there are detailed protocols relating professionals. There, medical diagnosis and decisions by physicians are transmitted to an organized (and to an important degree internally directed) nursing staff. Both the M.D. and the nursing director function as a manager of care, with the M.D. providing overall supervision. Nursing tasks are strongly related to medical diagnosis with well established procedures following from the establishment of a diagnosis.

In a nursing home the nurse is not the same kind of manager. Important authority rests with the administrator (who is more or less competent as a co-ordinator of care and always most competent as a business administrator). The admitting physician, who holds a pivotal position in certification, currently has very limited contact with the patient after admission. Most importantly for the point here, medical diagnoses and decisions are not significant for determining or evaluating day to day nursing care. Concentrating on diagnosis and discrete tasks is not appropriate with patients who have multiple chronic conditions, where fewer discrete tasks are visible or useful in defining the level of care needed or the quality of care, and where outcome is difficult to evaluate in terms of limited physical indicators.

Maria Phaneuf, an influential nurse educator who has written on nursing care planning and care audits, expresses her objections to current federal and most state policies thus:

"These regulations - and similar ones which pertain to home health agencies - arise from outmoded stereotypes of nursing. The stereotypes prevail because some nurses, physicians, institutions, and agencies find them convenient for maintenance of the traditional status quo in health services delivery. Payment agencies did not create the stereotypes, but do reinforce them through regulations and utilization reviews pertinent to payment. Payment is made primarily for the performance of tasks, not for a process of nursing directed to achievement of health goals by patients." (The Nursing Audit, p. 12.)

A social services model which classifies people according to eligibility and attempts to "manage" each case, pulling together resources and monitoring services may also be inappropriate for nursing care (and a large part of all services considered long term care). Eligibility is a legal and social judgement related to welfare and the redistribution of resources. Social service agencies must deal with a large number of services besides health care and many sets of criteria. They are specialists in acting as general intermediaries between people seeking help and a complicated welfare state. They often have excellent training in counseling and broad knowledge of the potential and limits of services.

Nursing care, however, is a specialized service involving more discrete technical decisions than can be reviewed or managed by a social worker. Of course, social welfare programs and agencies employ medical audits, as noted previously, and reviews by nurses and nursing care evaluators. Those reviews are limited by the stated aims and regulations of the programs, however, which, as we've noted, are based on non-nursing (medical and social services) models of care.

A third model exists which offers advantages in designing program policies, that is, a nursing care model. Viewing nursing home care, home health nursing (and other long term health care) as nursing services certainly seems reasonable, yet as stated before, public policy does not incorporate this view. There are several reasons for this. First, public experience with reimbursing long term care is relatively new. Most programs have been concerned with medical or social services. Criteria and methods were adapted from these programs for long term care, or long term care was added on to existing programs. Second, nursing care planning and assessment models are also relatively new, developed mainly for acute care settings, and are untried. There has not been agreement among nursing educators and practicing professionals on their elements of application. Then, too, nurses have not been as powerful as other health care professionals in influencing policy.

Enough discontent with existing approaches has been voiced by program administrators and providers who are concerned with the quality of patient care to warrant a state investigation of nursing and other models. Additionally, there is increasing agreement among nursing professionals on the general elements of care planning and assessment. It appears that a great deal of recent work could be adapted for long term care, and that efforts to alter the focus of public policy to emphasize the the functional assessment and nursing care would improve the quality of care and the quality of public support.

Various nursing assessment tools exist which take into account the comprehensive physical needs of a person and relate them to the person's emotional needs and resources. Dorothy Orem's work (33) is a good example of how physical and psychological needs can be integrated in an assessment. The Standards for Geriatric Nursing (34) proposed by the American Nurses Association offer a pertinent example for comparison with existing program criteria. Three of those proposed standards are:

ANA DRAFT STANDARDS FOR GERIATRIC NURSING

I

"Data are systematically and continuously collected about the health status of the older adult. The data are accessible, communicated, and recorded.

Rationale: In order to provide comprehensive nursing care for the older adult,

the data are collected from a framework that includes the scientific findings and knowledge derived from the fields of gerontology and nursing.

Assessment Factors:

1. Health status data includes:

   - Normal responses to the aging process.
   - Physiological, psychological, sociological, and ecological status.
   - Modes of communication.
   - Individual patterns of coping.
   - Prior life style.
   - Performance of activities of everyday living.
   - Older adult's perception and satisfaction with his/her health status.
   - Available and accessible human and material resources.

2. Health status data are collected from:

   - The older adult, significant others, health care personnel.
   - Other individuals in the immediate environment who are involved in the care of the older adult.
   - Interviews, examination, observation, records and reports.

3. The data are:

   - Accessible on the older adult's records.
   - Retrievable from record keeping system.
   - Communicated to those responsible for the older adult's care.
   - Confidential.

II

Nursing diagnoses are derived from the identified normal responses of the individual to aging and data collected about the health status of the older adult.

Rationale: Each person ages in his/her own individual way. The individual's normal response to aging must be identified before deviations in response requiring nursing actions can be identified.

Assessment Factors:

1. The older adult's health status is compared to the norm and a determination is made regarding deviations from the norm.

2. The older adult's prior life style, responses to the aging process, and personal goals and objectives are identified.

3. The older adult's strengths and limitations are identified.

4. The nursing diagnosis is related to and congruent with the diagnosis and plan of all other professionals caring for the older adult.

III

A plan of nursing care is developed in conjunction with the older adult and/or

significant others that includes goals derived from the nursing diagnosis.

Rationale: Goals are a determination of the results to be achieved, and are an essential part of planning care. All goals are ultimately directed toward maximizing achievable independence in everyday living.

Assessment Factors:

1. Goals are congruent with other planned therapies; are stated in realistic and measurable terms; are assigned a time period for achievement.

2. Goals determine specific nursing approaches that will promote, maintain and restore health.

3. Goals measure eventual outcomes of nursing care.

4. Goals are set from a framework that accounts for:

   - Normal developmental processes of aging.
   - Needs for intimacy and sexual expression.
   - Slowing down.
   - Losses.
   - Adaptability."

A comprehensive nursing assessment approach brings together more significant variables for determining the need for services and provides a better way for continually assessing the individual's progress than the medical or social services models. While Medicare, Medicaid, and the state licensure program (Facilities Licensure in the Health Department) are making efforts to include principles similar to those above, these principles have largely not been operationalized. (35) Until they are put into operation as criteria for reviewing care for reimbursement and as requirements for licensure, they will have little impact.

The goals and objectives stated under systems issues are intended to examine ways of adapting this model for public policy and to move the state in that direction. They recognize the need for coordinated public policy which supports a broad range of services and providers, and monitors the effectiveness of programs in an efficient and comparable way.

Individual providers, of course, are trying to implement comprehensive care planning and assessment such as outlined here. There has been considerable innovation by interested individuals, despite program policies which do not recognize or reimburse for them. The changes proposed in focusing on functional status and comprehensive assessment are intended to encourage funding and quality assurance that will enforce accountability and allow providers to offer needed services.

IX. Goal Statements for Health Status

The following goals and objectives set priorities among the conditions just discussed. There are three reasons for selecting some and not others. First, staff asked whether there were clear implications for long term health care, that is, could long term health care contribute to reducing the problem. Second, staff determined whether the state would now or in the near future be able to measure change in the problems. Agency resources and the likelyhood of change are the third factor.

Goals are stated in terms of measures of status which can be applied to all conditions. Objectives specify the conditions or status problems to be addressed by services and the direction and level of change expected if possible. Actions specify the services to be employed in meeting objectives. Finally, there are references to systems goals and objectives which will contribute to meeting the status objectives and goals.

A. Status Goal 1: The Reduced Incidence of Limitations in Functional Abilities or Activities Due to Chronic and Long Term Disabling Conditions.

Objective 1: The severity of chronic complications and limitations in activity from diabetes will be reduced in nursing home residents.

LRRA 1: The Iowa Foundation for Medical Care will solicit information on the management of complications of diabetes and will conduct a quality assurance study of present techniques in Iowa nursing homes by 1982.

Objective 2: The severity of chronic complications and limitations in activity from heart and circulatory disease will be reduced.

LRRA 2: The Iowa Heart Association, Iowa Medical Society, the State Department of Health and appropriate professional nursing associations will collaborate in collecting information to be distributed to the public and providers, on the management of chronic complications from heart and circulatory disease by 1982.

Objective 3: The incidence of chronic complications from heart and circulatory disease will be reduced.

Objective 4: The incidence of chronic dental problems among nursing home residents will be reduced.

LRRA 4: The Iowa Departments of Health and Social Services, Iowa nursing home associations, the University of Iowa School of Dentistry, and the Iowa Dental Society, will collaborate on a plan to increase Medicaid coverage and payments for regular prophylactic dental care by June, 1981.

Objective 5: The severity of chronic complications and limitations in activity from arthritis and rheumatism will be reduced so that no more than 158 persons per 10,000 population will have major activity limitation as a result of arthritis and rheumatism. (1974 national rate was 176 per 10,000 persons.)

LRRA 5: The Iowa Department of Health, Iowa nursing home associations, Iowa Arthritis Foundation, the Iowa Medical Society, and appropriate professional nursing associations will cooperate in collecting information to be distributed to the public and providers on the management of chronic complications from arthritis.

B. Status Goal 2: The Reduced Incidence of Diseases Associated with Lifestyle Which Have Chronic Complications

Objective 1: The incidence of heart and circulatory disease will be reduced.

Objective 2: The reduced prevalence of undetected and untreated hypertension without heart involvement.

(See Preventive Services Chapter for actions which will contribute to these objectives.)

C. Contribution of Providers and Services to Meeting Objectives

X. Problem Statements in Long Term Health Care

This section examines some of the services described above and problems which have been identified in their availability, quality, access, continuity, and cost. Special attention is paid to the impact of state policies. Data on the availability of services is mainly presented in summary. Complete data is available in the appendix and references are made to data and analyses in the HSPs and other plans.

A. The Availability of Services and Providers

1. Description of current supply and problems:

Hospice Care - Hospice of Central Iowa, a voluntary non-profit organization located in Des Moines is now the only Iowa hospice. Hospice of Central Iowa serves cancer patients in their homes within the greater Des Moines area. A hospice planning group has been organized in Waterloo, with the goal of providing care to terminally ill individuals in their homes by early 1980. Other planning groups exist in Dubuque, LeMars, and Davenport. The State Commission on Aging has assigned a staff person to work with such groups.

Because it is a relatively new service in the United States, and very new in Iowa, there were no specific statements concerning the need for hospice care from the Plan Development Task Force on Long Term Care, though there was general agreement that it was a valuable service. Discussion was mainly of the organization and reimbursement of hospice services.

The 1980 Illowa HSP (p. 515) notes that home health agencies do care for terminally ill persons now, though services are limited by a lack of staff and less than twenty four hour coverage. They also cite the increasing incidence of diseases which are predictably terminal, especially cancer, as indicating a need for hospice care. They call for two area hospice programs in 1980 (p. 523).

The 1980 Iowa HSP calls for increased availability of hospice care. Their objective is five programs reflecting the hospice concept of care in their area by 1985.

Specialized Clinics

There are now five organizations providing some adult day care in Iowa, four identified by the Iowa HSA and one by Illowa. The total daily capacity is approximately 76 persons (see 1980 Iowa HSP p. 129, Illowa HSP p. 476). Illowa concludes that day care does provide a different "package" of services than nursing homes and that there is a large number of non-institutionalized persons limited in activity or mobility who could benefit from day care. They also find that evidence shows day care to be less expensive than nursing home care even accounting for home maintenance (Illowa HSP pp. 482, 483) and call for five day care programs in the area.

The Iowa HSP reaches much the same conclusions and set an objective of twenty five adult day care centers providing both rehabilitation and maintenance services, with five certified for Medicare Part B and Medicaid reimbursement. (p. 234)

General Long Term Inpatient Nursing Care and Residential Care

The supply of long-term inpatient nursing care services in Iowa is heavily weighted towards intermediate level nursing care with little skilled care available. The amount of residential care varies a great deal between counties. Eleven counties have no residential beds, while the range for the remaining counties is 2-72 beds per 1,000 elderly. It appears that rural counties, and in particular rural counties near urban centers have residential care available. This may reflect the relatively high cost and low reimbursement available, which necessitates building lower cost settings. Skilled nursing beds are available in only sixteen Iowa counties. As of January 1980, Iowa had totals of approximately 31,000 ICF beds, 1124 skilled beds, 1,849 ICF/MR and 1,278 RCF/MR beds. (C.O.N. data)

Other than the pattern noted above for residential facilities no clear explanations emerge from data on the availability of services by county. It has been suggested that intermediate care facilities are also being built in rural areas near population centers, partly reflecting costs of construction and operation and partly reflecting the lower certificate of need ceiling which exists for urban counties. This is not clear from the data.

County care facilities provide residential and some intermediate nursing care. They are included in the figures for RCF and ICF beds but are also broken out on Table 7 because they serve a larger proportion of people with mental disorders than other facilities, and thus can be considered a special service. Their supply is extremely variable. One rural county has a new 154 bed facility while several urban counties have none. At least one urban county contracts for this care with other counties that are some distance away.

The HSAs are unanimous in calling for restraint of or decrease in the number of ICF beds and for an increase in skilled beds. The Iowa Foundation for Medical Care has identified between three and four thousand hospital patient days per quarter which should have been spent in skilled facilities, had any been available. (36) The Plan Development Task Force on Long Term Health also identified a lack of skilled beds.

Residential and alternative sheltered living situations with limited or no nursing care are also in short supply, and have been identified as priorities by the Iowa and Illowa HSAs, the State Plan for Mental Retardation and the 1980 Developmental Disabilities Plan. In Iowa, a large number of these facilities are licensed through the health department as residential health care facilities.

As mentioned above, the distribution of residential care is very uneven. Residential facilities should be community based and more evenly distributed because the chance for a resident's involvement in their community is great.

The Department is refraining from calling for specific reductions or increases in the nursing bed supply until revised Certificate of Need estimates can be established, though an increase in skilled nursing care is supported. Population based projections of the need for services are supposedly the heart of health planning. In fact, they are the most difficult analysis to do and least often accomplished. The appropriate range of services is easy enough to define - as a complete continuum of preventive and curative, institutional and noninstitutional services. The quantity of services needed,however, is very difficult to predict. It is especially difficult to do for long-term care because the resource and service measures are so inexact and inaccurate and because long-term

health care includes medical, nursing, pharmaceutical, rehabilitation and personal care.

A nursing home bed is actually a complicated bundle of nursing, medical and personal services. How, then, are we to evaluate the degree to which other services and providers can substitute for one nursing home bed, a common request when deinstitutionalization or alternatives to institutional care is discussed? Focusing on the professionals involved and refinements of utilization data is a first step in evaluating the degree to which services can be substituted for each other. We must develop data on the discrete services provided by the professionals involved and tie this information to outcome data. All of these issues are being considered in revising C.O.N. bed need formulas and standards.

One system not analyzed in this year's plan is the Veteran's Administration. The state office has begun conversations with the Veteran's Hospitals and Administration and will be gathering data on the special service needs of veterans and estimates of use. The Knoxville V.A. facility is the primary long term care facility, with 200 long term care beds divided into three levels of care. All facilities are authorized to contract for nursing care with private homes, paying up to $41 per day for six months, if the disability is not service connected, and indefinitely if it is. Placements to nursing homes are not limited to such contracts, however.

There has been considerable controversy over the placement of V.A. patients in local homes, whether local bed needs should be increased and whether they are displacing or prempting local residents. It has been said by a V.A. administrator that some, such as stable psychotic residents who have an average length of stay of eight years, are very desirable patients. Investigation of these issues and the V.A. system will be a priority for plan development this year.

Specialized Long Term Inpatient Nursing Care and Residential Care

The largest segment of specialized, community based inpatient care is that for the mentally retarded. The range of services now available is shown on Table 14, along with the appropriate services and settings for different levels of retardation.

The Iowa HSP calls for the expansion of respite care for developmentally disabled persons living with their families. Here, the inpatient care is intended to be brief and to offer rest and support for families attempting to care for them. The State Plan for Mental Retardation and the 1980 Developmental Disabilities plans call for increased availability of supportive living arrangements other than nursing homes.

While there are few direct statements concerning the levels of unmet need for these specialized services, it is generally recognized that the less health care intensive and less program intensive services will be more significant as persons are discharged from the more intensive services.

Distribution of nursing services has been mentioned as a problem. At the present, about 50% of all MR beds are located at the state schools at Woodward and Glenwood, much more than the 20% assumed in the C.O.N. bed need formula. An unofficial goal of the State Department of Social Services is to lower the number of state beds from about 1,531 to 1,000. This target is being built into the revised state bed need formula.

The supply of residential facilities for substance abusers has not been assessed. The Iowa Department of Substance Abuse is the main source of information on these services and they have not astablished any targets for expanding them.

Long Term Care Providers

The almost unanimous concern of the Health Systems Plans and the Plan Development Task Force on Long Term Care was to expand the number of therapeutic personnel available. The lack of physical, occupational and speech therapy was seen as the greatest problem in completing a continuum of services. Health care facilities, providers, and planners all agree that the number of these professionals practicing in Iowa must be increased if our long term care system is to move from giving maintenance to habilitation and rehabilitation.

Again, specific numbers and levels of need are not provided. Assessing this need will be a priority for plan development. The Iowa HSP does contain description of the present supply of personnel, call for a task force to assess levels of need (pp. 293-302) and recommend that training in habilitation, rehabilitation and maintenance care be a required component of all nusring school curricula.

Besides requiring such components in existing programs, it would also be wise to evaluate the need for new or expanded programs. For example, there is only one occupational therapy assistant program in Iowa (Kirkwoood Community College in Cedar Rapids) and no occupational therapist program.

In Home/Home Centered Health Care

Home health care in Iowa is provided mainly by county public health departments, as noted above. Home health care is available in all counties. Ninety-seven of ninety-nine counties have Medicare certified agencies as of 4-80. (See appendix for details)

The problem identified by the Iowa and Midlands HSAs is that most agencies offer only the basic services required for certification. Both HSPs call for various therapeutic, rehabilitative services to be provided by home health agencies. They argue that if home health care is to be cost effective and reach its potential as an alternative to nursing home care, it must provide these services.

The argument is often made that home health care is less costly than nursing home care or hospital care and should be made available to reduce expenditures by substituting for them. A recent review of all literature on home health care cost effectiveness concludes that while home health is a less expensive trade-off for nursing home or hospital care, the per-diem savings are usually eliminated by increasing use of all services. (37)

The author suggests that an overall increase lasting two to three years, will occur any time expanded home health care is made available, due to unrecognized problems and pent-up demand. After three years, home health care should begin to delay institutional admissions and offset the costs and use of institutional care. Goals for expanded services should take this into account in predicting savings.

Pharamceutical Services and Consultation

There has been no evaluation of the involvement of pharmacists in the regular provision of long term health care. Comments from the Plan Development Task

Force on Long Term Care indicate that the relationship between pharmacists and other providers varies a great deal, and that the pharmacist can perform a more active role in the care of nursing home residents, for example.

Medical and Dental Care

The lack of dental care for nursing home residents is discussed above in the status problem section, and is addressed as a status objective. This problem is also recognized by the Iowa HSA.

The LTC Task Force discussed two problems in delivering medical care to those in institutions and disabled. One concerned reimbursement requirements (see below), the other transportation. It was suggested that it would be more efficient and improve quality if residents were transported to a physician's office.

Long Term Inpatient and Outpatient Care for Mental Illness

The number and location of Mental Health Institutes and Community Mental Health Centers is contained in the Mental Health Chapter. The lack of services for the elderly and the unclear defintiion of chronic mental illness are discussed in the status problem section above. Not previously noted is the Community Support Program. Here the Community Mental Health Centers communicate with the Mt. Pleasant Mental Health Institute in providing follow-up care to persons released to the community.

Both county care facilities and nursing homes also provide long term care for mentally ill persons. There is increasing concern over the availability of mental health services in these or to these faciliteis. Some county care facilities are working with the Mental Health Institutes in training staff and exploring new services. The appropriateness of nursing home placements has not been evaluated.

Investigation of the long term services actually provided by MHIs, CMHCs, County Facilities, hospital based psychiatric units, and private providers should be plan development priority.

Assessment and Coordination Services

As mentioned before, four services are included here. They are:

1) functional assessment
2) coordinated evaluation of service needs
3) discharge planning
4) rehabilitation counseling

Only discharge planning and rehabilitation counseling exist in any frequency today. The lack of rehabilitative personnel has already been noted. The amount and effectiveness of current discharge planning is being investigated this year following objective two under goal one, in the systems goals and objectives section. A survey of home health agencies has been developed, asking about their experience with referrals and discharge planning.

Functional assessment is performed according to various scales (see above), and is not regularly used in care planning or services analysis. Coordinated evaluation of service needs and case management are recognized by several plans

as priorities, including the State MR Plan and the 1980 State Plan for Crippled Children's Services. The Crippled Children's plan contains a subgoal to develop and test indicators of status for service, function, health, and family problems. They also propose to develop a scale to assess the functional status of disabled children.

- Effect of Statewide Policies on Availability -

Public Reimbursement

Public reimbursement is seen by all planning groups as crucial to developing an appropriate mix of services. As the programs now stand, public reimbursement (Medicaid and Medicare) in Iowa is considered to have resulted in the following problems:

1. Too few residential care beds
2. limited services and populations served in specialized ICF and RCF facilities
3. Insufficient home health care
4. Limited involvement of pharmacists
5. Limited dental care

The effect of reimbursement levels and policies on the supply of skilled beds is now being evaluated by the Department of Social Services.

Medicaid reimbursement of residential care is a recurring issue. It has been suggested in various study groups/task forces that Iowa establish a second class of intermediate care which would include most existing residential care and be eligible for 50% federal money through Medicaid. There is considerable controversy over whether the state would save money and whether proper care and a proper setting would be maintained.

The issue of a limited scope of services and residents in ICF/MR and RCF/MR facilities is a new one. During this year's Plan Development Task Force meetings there were discussions of severely physically handicapped (accident victims) and other persons who did not fit into the MR - programming but had no where else to go. This will be a topic for plan development.

Reimbursement of home health care through Medicare has been made less restrictive in recent years. This is important because most Home Health Agencies depend heavily on Medicare for funds.

The effect of reimbursement policies on the use of services should be calculated taking into account many influences, most importantly the supply of professionals and their knowledge of policies. For example, expanding the reimbursement possible for home health care does not necessarily mean more health services delivered. Medicaid regulations and the Iowa State Medicaid Plan have remained fairly constant since 1976. Only in 1978 did Medicaid reimbursement for home health care increased substantially, however, 158% over 1977, the largest increase of any service covered by Medicaid.

A possible explanation for this lag is in recent increases in the supply of county public health nurses who provide the bulk of home care services. Even when payment became less restrictive in 1976 (due to dropping stricter Medicare standards) public health nurses have had to show an increase in case load before

additional personnel could be added, a serious constraint on expanding services. (38) The 1977 to 1979 special appropriations by the legislature for home health (House File 597) have increased the supply of home health nurses. (39) This and perhaps wider recognition of Medicaid coverage and experience with processing Medicaid home health claims are logical explanations for increased numbers of Medicaid home health visits. In any case, the actual increase was from a base of only $14,000 in 1975. Even the 1979 expenditure through Medicaid of $441,682 is much lower than the million dollars projected in 1976 for 1978 by the Department of Social Services. There must be further investigation of barriers to the use and reimbursement of home health care. This is now being carried out through a survey of home health agencies and through requests for information to Department of Social Services.

It was suggested in the LTC Plan Development Task Force that pharmacists should be integrated into the long term care system by requiring that each LTC facility have a pharmacy consultant who would work with the facility, physicians, and other providers in coordinating, monitoring and evaluating the residents overall drug therapy. Existing programs in Minnesota, Wisconsin and other states were suggested as models.

The influence of reimbursement on identified dental health problems and the lack of dental care in facilities is unclear. Current Medicaid Provisions (Iowa Administrative Code Section 770, Ch. 78.4 (249A)) appear liberal and comprehensive, though perhaps slightly weak in support of prophalactic care. Problems in delivery of care and administration of these benefits should be examined.

Quality Assurance and Accountability

Iowa's licensure laws obviously define the types of facilities available. The Iowa rules are closely patterned after federal Medicare and Medicaid requirements. It is possible that the strict and extensive requirements for skilled facilities may be limiting the supply of skilled beds.

It was suggested during the LTC Task Force that the lack of licensure for home health agencies may be restricting the supply of home health care, since for-profit homes can not be certified for reimbursement unless licensed by the state.

Cost Containment and Control of Capital Expenditures

Certificate of Need directly affects the supply of health care facilities through application of bed need standards. These standards attempt to take population and service variables into account in predicting the aggregate need for counties or groups of counties. Bed need is one of several standards which are considered in approving or disapproving an application.

It has been suggested that the C.O.N. bed need standards have been arbitrary and inaccurate for nursing homes, especially MR facilities. This and another possible detrimental effects on cost and quality detailed below, have been extensively discussed by the health planning agencies in the course of determining the policy assumptions previously listed. While there were questions even as to the validity of any bed need standards for nursing homes, the conclusion reached was that control of capital investment would have a legitimate role for some time, and that the problems pointed out in individual counties were not inherent flaws in the design of C.O.N.

Following this, the Department will continue steps to revise and improve the sensitivity of the formulas used to predict bed need, and to improve the administrative process.

Direct Service Policies and Efforts

In Iowa, the public sector is extensively involved in providing direct services. Cities, counties and the state have taken the initiative in meeting service needs, and in filling the gaps left by federal programs. Thus, the problems in this area are mainly where the public sector can expand or improve rather than where entirely new programs are needed. As identified by the HSAs, the LTC Task Force, and the public program agencies themselves, the following are areas of concern in availability of direct service.

1. Increased support of county public health nurses in supplying home health care through special Health Department Appropriations.

   In 1978, Iowa recorded the lowest per visit Medicare charge of any state in the nation and the third highest number of visits in this region. (40) Staff believes this may be due to the fact that the vast majority of home health care is provided by the county health departments.

2. Increased programming at county care facilities. (Counties)

3. More stable Title XX funding for health support and social services which influence health. (Social Services)

4. Increased diagnosis and evaluation (D and E) services provided by the regions or by the state schools to communities. (Social Services)

   Currently, there is a six month to year and a half delay in scheduling and completing a state school diagnosis and evaluation.

5. Increased follow-up care and case management services for persons released from Mental Health Institutes to the community and for those in the community with chronic mental health problems.

6. Increased state capacity to evaluate the need for services and the effect of care in terms of the independent functioning of the individual.

Private Insurance and Other Private Policies

There are two issues here which have not been analyzed and should be priorities for plan development. These are:

- the existence of private insurance coverage of long term care
- the types of life-time service contracts which now exist and are or will be sold in Iowa.

- Goals And Objectives Concerning The Appropriate Range And Quantity Of Long Term Health Care Services Which Should Be Available -

GOAL 1: THE MOST EFFICIENT AND EFFECTIVE MIX AND DISTRIBUTION OF LONG-TERM HEALTH CARE SERVICES (MANPOWER AND FACILITIES) IN IOWA.

Objective 1: By 1986 the actual distribution of all nursing care beds by county will be based on standards established by the Department of Health.

SRRA 1: Standards for the number of nursing care beds needed in each county or aggregates of counties will be set by the Department's Certificate-of-Need Program using a revised population based bed need formula.

LRRA 1: The Department will pursue the conversion and closure of excess beds through implemenation of a program of technical assistance, incentives, and sanctions.

Objective 2: All financial and administrative barriers to reimbursement of home health services be removed from public reimbursement by 1983.

SRRA 2: The Department and the Iowa Department of Social Services conduct a survey of home health agencies to identify financial and administrative barriers to full reimbursement of all home health services.

LRRA 2: Based on the findings of the above survey and analysis by the Department, Medicaid and Medicare rules and regulations be changed to allow for and facilitate full reimbursement of all home health services by 1983.

Objective 3: All financial and administrative barriers to reimbursement of "skilled" or heavy care nursing will be removed from public reimbursement programs by 1983.

SRRA 3: Any reasons for the small number of skilled nursing care beds in Iowa related to licensure or Certificate-of-Need will be investigated by the Department and a report written.

SRRA 3a: Any reasons for the small number of skilled nursing beds related to reimbursement policies will be investigated by the Department of Social Services and the Medicare fiscal intermediaries and a report submitted to the Department.

LRRA 3: By 1982, the Iowa Department of Social Services will have investigated alternative schemes for Medicaid reimbursement of nursing home care including:

(1) prospective payments;

(2) payments for services delivered;

(3) performance or outcome differentials; and

(4) adequate reimbursement and more extensive coverage of rehabilitation and maintenance services.

Objective 4: Actual distribution and numbers of Public Health Nurses by county will be based on research conducted by the Department (Office of Health Planning and Community Services) by 1986.

LRRA 4: Standards for the minimum number of Public Health and Home Health Nurses will be set by county using the Western Interstate Commission on Health Education or similar manpower model, to be applied by the Department of Health by June 1982.

LRRA 4a: The Department of Health will prepare a cost-effectiveness report on the effect of implementing the minimum standard, and recommend state funding to the legislature by 1983 based on, and as a part of this report.

Objective 5: The Iowa Legislative will continue and expand the special state appropriations for home health care.

SRRA 5: The Department will submit a yearly evaluation and budget request to the legislature.

Objective 6: All County Care Facilities will have programming which meets the physical, emotional and psycho-social needs of the residents and supports their maximum independent functioning by 1986.

SRRA 6: The Mental Health Institutes will expand their program of consultation to the County Care Facilities.

LRRA 6: The Iowa Department of Social Services and the Department of Health will collaborate with county governments to assess the programming available and set standards for needed services by 1984.

Objective 7: Aftercare, follow-up care and case management will be available for all persons in the community with chronic or long term mental health ploblems.

LRRA 7: All four Mental Health Institutes will participate in community support programs by 1985.

Objective 8: There will be thirty programs offering adult day care services in Iowa by 1986, with at least ten of these certified for Medicare and Medicaid reimbursement.

SRRA 8: The Department of Social Services and Blue Cross/Blue Shield will prepare an information package explaining potential Medicare and Medicaid reimbursement.

LRRA 8: By 1982, the Department of Health and Area Agencies on Aging the information and be encouraging formation of day care centers.

Objective 9: Respite care for developmentally disabled persons living with their families will be available in each county by 1986.

SRRA 9: The Departments of Social Services and Health will collaborate with the State Core Advisory Committee, Office of Developmental Disabilities and Health Systems Agencies in identifying existing and potential types of respite care and providers.

Objective 10: Diagnosis and evaluation service will be available within three months of a request to the State Schools, to be delivered at sites in each Department of Social Services district.

SRRA 10: The Department of Social Services will assess the cost of providing this outreach service and request funding from the legislature.

Objective 11: The supply of professionals providing rehabilitative and therapeutic services will be increased to meet identified need by 1986.

SRRA 11: The Department of Health will review the results of a task force initiated by the Iowa Health Systems Agency which will assess the adequacy and specific short falls of the current supply, and recommend state support of training, and placement programs as appropriate.

Objective 12: The Department of Health will establish licensure of Home Health Agencies by 1984.

SRRA 12: The Department will convene a task force of home care providers to make recommendations to the Department concerning licensure provisions.

LRRA 12: The Department of Health will develop proposals for additions to the Iowa Code and Administrative Code for licensure provisions by 1982.

LRRA 12 a: The Department will assess the cost of administering licensure of nursing homes and submit a budget request to the legislature by 1983 for the 83-85 biennium.

LRRA 12b: The Department will begin administering licensure by 1984.

Objective 13: Comprehensive assessment and coordination services will be available in each county by 1986.

SRRA 13: The Department will support and monitor expanded demonstration projects of the Iowa Model Gerontology Project providing comprehensive assessment and referral services; and continue to assess the Scott County project.

Objective 14: There will be ten programs offering complete hospice care or incorporating hospice concepts on voluntary, non-profit basis in Iowa by 1986.

LRRA 14: The Department of Health will develop Certificate of Need standards for the organization, minimum services, and staffing of hospice care by 1982.

LRRA 14a: By 1983 the Department of Social Services will include hospice care in the Medicaid Plan for reimbursement of administrative and home services involved in hospice care not elsewhere covered.

LRRA 14b: Some private insurers in Iowa will reimburse hospice care by 1984.

Objective 15: The use of mental health services by the elderly, women, minorities and handicapped will be increased to a point proportional to area populations by 1986.

SRRA 15: The Department will contact all community Mental Health Centers to obtain their plans for meeting this objective.

SRRA 15a: The Department will work with the Mental Health Authority to set regional target levels.

Objective 16: Pharmacists will be integrated into all long term health care services by 1986.

SRRA 16: The Department will investigate Pharmacist consultant programs in other states.

LRRA 16: Pharmacist consultants will be required for licensure and certification of skilled and intermediate care facilities by 1983.

LRRA 16a: Pharmacist consultants will be required for licensure and certification of home health agencies by 1984.

GOAL 2: All Iowa citizens will have available long term health care which allows them maximum independence (is least restrictive) and which maintains as much community contact as possible.

Objective 1: All Certificate of Need decisions on long term care will be made taking this goal into consideration.

SRRA 1: Planning staff will provide information on and analysis of the appropriateness of current and projected placements in long term care

GOAL 2: All Iowa citizens will have available long term health care which allows them maximum independence (is least restrictive) and which maintains as much community contact as possible.

Objective 1: All Certificate of Need decisions on long term care will be made taking this goal into consideration.

SRRA 1: Planning staff will provide information on and analysis of the appropriateness of current and projected placements in long term care.

Objective 2: The Department of Health will encourage conversion of Intermediate Care Facility beds to skilled and residential levels.

Objective 3: The Department of Health will encourage the development of sheltered living and other personal care settings.

Objective 4: Coverage of adult day care services will be added to Medicaid by 1982.

SRRA 4: The Department will present data on the benefits of adult day care to the Department of Social Services and the legislature.

B. Quality of Care

Quality of care is defined here as the effect the care has on patients, the outcome of care. Quality is currently measured in public programs largely in terms of the number and kinds of services provided, who gave them, and minimum safety and sanitation standards. The objectives here are directed towards policy and management analysis as a first step in making cost-effectiveness decisions, and improving quality. These decisions are important in various regulatory efforts including C.O.N. and public reimbursement. Information generated on the outcome of care would be of great use in licensure.

The licensure of facilities and the approval of new facilities are powers of the Health Department. Reviewing individual plans of care and the progress of patient receiving public assistance are responsibilities of the P.S.R.O. Licensure, too, has requirements that a plan of care exist for each patient and has the authority to fine or close facilities for malpractice.

The problem statements and goals in this section are first directed at improving the data and information regulatory decisions are based on. Secondly, they begin to call for more specific and clearer delineation of provider responsibility for the type and quality of care given. Measures of functional status are proposed to be investigated over the next two to three years. It is suggested that functional status should be a common denominator for decisions on services to be offered and on the efficiency and effectiveness of care, and that a comprehensive management information system be established.

It is suggested that this would be a considerable improvement over the present. Public decisions and those by providers are now based on varying models and criteria for evaluating need, and prescribing and auditing care. It is very difficult to assess need and and evaluate care using the present fragmented data.

Definition of quality will continue to be a priority for the next five years. Discussions should involve providers, professional associations, the HSAs and other state agencies.

- Special Issues Influencing Quality of Care -

During work with the State MR Care Advisory Committee on revising the bed need standard for ICF/MR and RCF/MR facilities, several other issues which related to quality of care were discussed. These were aspects of services which they and staff felt should be considered in reviewing C.O.N. applications. It was suggested that in lieu of developing standards, consideration in the State Health Plan would provide a basis for review on those points.

The primary concern related to quality was that the state should encourage local community corporations and discorage the involvement of out-of-state, absentee corporations and overlapping management and investment. It was stated that volunteers and community participation were absolutely essential to good programming. It was felt that out-of-state or large corporations would not have the interest or community support to develop such voluntary participation.

This reasoning appears to be sound. An effective MR facility and program must have ties with education, recreation, health care and various volunteer support services. It is more likely that an individual community corporation under independent management would be aware of all local resources and be able to obtain extensive community support.

- Effect of Statewide Policies on Quality -

Public Reimbursement

One relationship here is certification procedures for facilities. The state has the authority to deny reimbursement to any facility not found in compliance with federal standards. Presently, these standards focus on the resources of the facility, minimum safety and sanitation, and the documentation of standard operating procedures. There are no measures of the care actually given or its effects on residents.

As with licensure, it is the conclusion of a recent consultant s report (Dr. Yong Lee, Progress Report on development of outcome measures for state licensure) that such regulations foster paper compliance and do not provide adequate information for the administrative process designed to bring about compliance with minimum standards. In addition, the only sanction available to reimbursement programs is de-certification. This affects all public patients in a facility, requires substantial documentation, and may take a year or more to complete. Some possible changes here would be to introduce fines or requirements for re-payment of money which would be easier to enforce case by case.

There have also been concerns that the Medicaid lid on ICF care places demands on homes to cut corners to remain below the lid and receive as much "incentive payment" as possible. It has been said that homes are unable to adequately and flexibly respond to the needs of residents when they do not know whether their total expenses will fall below or above the 74th percentile of all homes, even if all their care was appropriate and all costs were allowable. The Department of Social Services responds that the 5% inflation factor applied every six months eliminates some uncertainty, and that they do not place an absolute lid on payments but rather a relative one in that 3/4 of all homes recieve full reimbursement.

The facts of budgeting are such, however, that the Iowa legislature expects a figure to be designated as the ceiling, and that the Department will remain within that ceiling in making payments. Administration of the program becomes a matter of adjusting rules and procedures to make the most equitable and effective distribution of the funds.

Quality Assurance and Accountability

As noted above, the primary problem which has been identified in quality

assurance is the lack of information on outcome of care. In reviewing the licensure survey instrument, Dr. Yong Lee who is currently consulting with the Department on possible ways to revise the survey, also noted that almost all questions were to be answered yes or no, which did not allow for sufficient discriminiation of problems or the consistent, comparable documentation of problems for administrative procedures.

Besides revising the survey, other possible changes would be to increase the range of administrative and civil options open to the Department in trying to bring about compliance. These expanded options might include:

- requiring a change of ownership
- requiring that the cost of care be refunded to patients
- requiring a change of management

It has also been noted that present regulations approach providers as adversaries. The Department is charged with enforcing minimum standards and catching culprits who fall below these standards. Expanding the range of administrative options and improving the information base would do a great deal to change this and place the Department in a position of encouraging quality of care.

A recently identified issues is the coordination of D.S.S. and Health Department activities is monitoring facilities and programs. During the LTC Task Force it was suggested that one or the other agency should be given clear lead responsibility and should examine both health care resources and the actual programming offered. There was concern that while the Health Department appears to be taking the lead, they give limited attention to programming.

Related to this is concern over the quality of care in County Care Facilities. There have been suggestions that D.S.S. and the Health Department should coordinate their responsibilities and propose changes to make accountability clearer.

Cost Containment and Control of Capital Expenditures

Although not identified in any plan as a problem, it has been stated by Iowa HSA officials and persons in the Licensure Division of the State Health Department that the restriction of bed supply to the minimum need level severely restricts consumer choice and the ability of Licensure to deal effectively with providers. In effect, they see providers as having a franchise or a monopoly in a given area. It is thus difficult for individuals or the state to attempt to transfer persons between facilities.

These comments have all been based on individual, isolated cases where quality of care was poor and there were few alternatives visible. There has been no systematic examination of the extent of this problem, or definition of geograhic monopolies by service. In addition, it is not clear how much of the problem is due to flaws in reimbursement, utilization review and quality assurance distinct from those in Certificate of Need.

This issue should be examined over the next three to five years as part of a comprehensive assessment of Certificate of Need. Possible activities would be

- a patient origin study (also related to access)
- limited experiments with revised CON standards
- cost and quality studies.

Direct Public Service Policies and Efforts

There are no identified, specific problems here. A somewhat relate issue is state responsibility for assuring the quality of care in County Care Facilities, discussed above. Possible issues for future investigation could be

- professional education and training
- continuing education.

Private Insurance and Other Private Policies

It was noted above that peer review of care was increasing in importance, and that there has been a strong effort to involve providers in more public forums concerning quality. While there is continued concern that private, professional organizations not act as "protection" agencies, there has been considerable progress in bringing peer review into the light, improving accountability and eliminating restrictive trade practices.

- State Goals and Objectives Concerning Quality of Care -

GOAL 2: QUALITY OF LONG TERM HEALTH CARE WILL BE ASSURED FOR ALL IOWANS IN TERMS OF THE OUTCOME OF CARE.

Objective 1: All Iowa Nursing Homes will be reporting standardized data on the outcome of care on a regular basis as a requirement of the licensure process by 1985.

SRRA 1: The Department of Health will develop and test an instrument for measuring outcome of care by 1981.

LRRA 1: The Department of Health will develop and implement a management information system for collecting and reviewing data on the outcome of care by 1985.

Objective 2: All providers of long term health care will be collecting some standardized data on assessment of need by 1986, and reporting summaries of this information to the Health Department.

SRRA 2: The Department of Health will convene and support a task force to develop a minimum set of functional status, health status, and demographic data for long term health care.

LRRA 2: The Minimum Long Term Care Data Set Task Force will report to the Health Department by June of 1981.

Objective 3: The Department of Health will expand its range of administrative actions for quality assurance by requesting authority to require a change of ownership where a serious problem with quality of care has been shown.

C. Access to Care

There are three aspects of access. All are presented in this section, though objectives are developed for only one. These aspects are:

- consumer and provider information;
- geographic distribution of services; and
- financial access.

Each is equally important in determining overall access. Problems which have been noted include

1. A general lack of information on the availability and function of non-institutional services.
2. A concentration of mental health services in large institutions.
3. A concentration of services for the mentally retarded in the state schools.
4. A concentration of skilled nursing beds in a few urban areas.
5. A concentration of some rehabilitative and therapeutic personnel in two or three large urban areas and the University of Iowa.
6. An uneven distribution of residential care.
7. A general lack of diagnostic and assessment services in rural areas.

Analysis of access to long term health care as a separate issue is fairly limited. Both geographic and financial access are usually discussed in terms of availability of services to special areas and populations, and in terms of the effect of reimbursement. For this reason there is no analysis of the effect of each different category of policy on access.

Analysis of access, especially financial access should be a priority for the next two years. Inflation and rapid dislocations of the economy are likely to result in changing patterns of need - patterns different than those present reimbursement programs were designe to meet. The Department of Social Service is now evaluating the need for and cost of adding the medically indigent, those with low to moderate incomes and high or catastrophic health care expenses, to Medicaid coverage.

In discussions concerning consumer and provider information, the LTC Plan Development Task Force concluded that a consumer guide should not be a catalog of services. They felt an attempt to catalog would be expensive and soon out-of-date. Such information should be available on a county or regional basis, but not the state. The task force felt a guide which explained the types of services available, what you could expect from providers and where to go for additional information would be the most useful.

Access to information before care is needed and when care is being sought is very important. Information on what to expect from services is especially important. People who need care are struggling with a sudden or gradually accumulated loss of independence, a loss of ability to work or keep a home which can not be quickly or completely made right again. It is difficult for them or their families to make decisions, to see realistic goals. Reactions are many times extreme, denial of the problems or complete surrender to them. Families may have had little contact lately with their parent or grandparent and do not understand what they can and can not do. Expecting too much leads to frustration and feelings of failure as they try

to help. Expecting too little means a capitulation to the difficulties and a guarantee they will grow worse.

Providers, too, are uncertain about what kind and quality of maintaining and rehabilitating care is available. Physicians are often unfamiliar with the potential of therapists and noninstitutional nursing services or they are unwilling to prescribe these services, to make referrals. Physicians who are extremely busy with their medical practice find it very difficult to follow the progress of patients in nursing homes. The LTC Task Force expressed frustration at requirements for regular visits whether the patient needed an examination or not. Lack of physician involvement in long term nursing care has been and still is a problem.

Some home health agencies after many years have established good relationships with local physicians, as have some nursing homes. This trust and understanding is essential for coordinated use of long term care services, and coordination is absolutely necessary to effective use of services.

- State Goals and Objectives Concerning Access for Long Term Health Care -

GOAL 3: CONSUMERS AND PROVIDERS WILL HAVE ADEQUATE INFORMATION ON LONG TERM HEALTH CARE SERVICES.

Objective 1: A statewide consumer guide to long term health care services will be available to consumers, providers and any interested public agencies by 1982.

SRRA 1: A survey will be conducted by the Department of Health in cooperation with the Iowa State Commission on Aging to determine the information considered most useful by consumers and providers in selecting types of care and specific providers by March, 1981.

SRRA 1a: The Department of health will convene a consulting group of educators, providers, and public officials to provide advice on the guide.

SRRA 1b: The Department of Health will establish funding for a consumer guide to long term health care.

SRRA 1c: The Department of Health will coordinate the survey of providers and services and production of the guide.

LRRA 1: The Department of Health will publish the guide by March, 1982.

LRRA 1a: Distribution of the guide will be accomplished through the Iowa Commission on Aging, the Iowa Hospital Association, Iowa Association of Homes for the Aging, Iowa Mental Health Authority, Iowa Pharmacists Association, Iowa Department of Social Services, Iowa Health Care Association, and by the Department of Health by May, 1982.

Objective 2: A counseling manual for providers which focuses on the emotional and social support of the person seeking long term health care will be available to all providers and interested public and private agencies by 1983.

LRRA 2: The Department of Health will convene a consulting group of educators, providers and public officials to provide advice on the manual by June, 1981.

LRRA 2a: The Department of Health will establish funding for the counseling manual by January, 1982.

LRRA 2b: The Department of Health will publish the manual by June, 1982.

LRRA 2c: The counseling manual will be distributed through the same network established for distribution of the consumer guide by 1983.

Objective 3: Indirect measures of access will be developed based on information concerning the appropriateness of placements.

LRRA 3: The Department of Health will obtain data from the Iowa Medical Foundation on the appropriateness of placements in long term care facilities and hospitals by 1981.

D. Continuity of Care

Continuity of care or coordination of services is defined here in terms of:

1. Appropriate movement "up and down" in intensity of care;
2. Provider acceptance of other services;
3. Multi-disciplinary assessment of problems; and
4. The adequate transmission of information on referrals to assist the next provider.

Continuity is the continuous and responsible transfer of information, and accurate and timely referrals between services by providers. Actions to this end can be distinguished from improvements in access. Continuity focuses on the quality of patient care based on the quality of provider cooperation. Access refers to knowledge of other services and the appropriateness of referrals. As such, access is prior to continuity. Continuity is achieved through mechanisms to insure each activity above.

Obviously, the objective above which calls for expanded assessment services is directly related to continuity. Objectives concerning the development of better management information and measures on the outcome of care will also contribute.

In general, the most important problem in continuity is extending and expanding the contact between providers. Most discharge planning covers only a brief period after the discharge. Discharge support may fade and disappear if contact with another provider is delayed a week or two.

Reimbursement

Both Medicaid and Medicare require discharge planning, though Medicare does not reimburse this as a separate service nor does Medicaid recognize this as a separate allowable cost. Medicaid requires that "The administrator and staff shall assist the resident in planning for transfer or discharge through development of a discharge plan." (In Administrative Code Section 770-81.5 (249 A)) The Medicaid regulations also specify the information which must be transfered, though there is no regular review of compliance with these provisions.

Reimbursement also affects continuity by influencing the range of services available to individuals. Where a needed service is not covered, and the person can not pay for it, a break in continuity occurs as the preson does without or seeks another source of assistance. This can be minimized by providing more comprehensive coverage (addressed under availability) and by requiring some kind of "discharge" or termination of benefits planning.

Quality Assurance and Accountability

Iowa's licensure rules also require that certain information be transferred, and that the family, attending physician, legal representative, and sponsoring agency, if any, be notified prior to transfer or discharge. (Iowa Administrative Code Section 470-58.12(2)) Again, the Department does not regularly review discharge planning except on complaints and as the facility complies on paper with the regulations.

Cost Containment and Control of Capital Expenditures

There are no identified problems or issues.

Direct Service Policies and Efforts

This is perhaps the area of state policy with the most impact on continuity. The potential of some programs, such as the Community Support Program, have already been discussed in terms of the availability of assessment and coordination services. The coordination of state policy and adoption of common assumptions by statewide programs has also been acknowledged.

The nature and extent of specific coordination problems between public services has not been well assessed. One area in which other states have experienced problems and which may be troublesome in Iowa is the coordination of in home services.

In Iowa in home-health care is almost exclusively provided by the public sector. County public health departments provide home nursing, homemaker-home health aide service, and other services. The primary sources of reimbursement are Medicare and the county. The State has provided special appropriations to expand personnel. The Department of Social Services provides homemaker-home health care, chore services, counseling and other support services through Title XX contracts. The Area Agencies on Aging and Nutrition Centers provide meals and friendly home contacts.

Each funding source has different eligibility requirements, service coverage, and total budgets. Each agency provides different training to its personnel.

The result is, or can be, many situations in which care is terminated and not picked up, two are giving care at the same time without knowing of the other, or providers are giving care based on separate, differing assessments.

In addition, some home health nurses are uncomfortable with the training that homemaker-home health aides receive who are not connected with a home health agency. The observation has also been made that without a nursing plan of care to refer to, an independent aide may find themselves attempting to handle problems they were not trained for.

Finally, the state can make an important contribution to continuity in planning for services. As noted in the introduction, there are many programs with responsibility for health care and health related services. The decision in writing this plan was to focus on health care services, recognizing the great importance of health and activity support services. The possibility of integrated human services planning was mentioned.

In the future, it will be vital for the state to develop some more coordinated system of planning and budgeting for human services. (41) Improvements in the quality of services and in health status will only occur if the interaction of health care and social services is considered. Restraint in the growth of program budgets will only have a chance if agencies evaluate overlapping services and gaps in an intergrated planning process.

The objectives included here are modest steps to achieving these ends. They call simply for opening and strengthening lines of communication between agencies and comparing long range goals and problems.

Private Insurance and Other Private Policies

There are two issues here, the completeness of coverage of an individual health care policy and the potential active role of insurers in transferring information between consumers and providers. Neither has been adequately assessed and should be a priority for plan development.

- State Goals and Objectives Concerning Continuity of Care -

GOAL 4: THE CONTINUTIY OF LONG TERM HEALTH CARE WILL BE ASSURED FOR ALL CONSUMERS.

Objective 1: By 1986, all providers of in-home health care will participate in a coordinated assessment and referral system.

SRRA 1: The State Departments of Health and Social Services will collaborate with the Commission on Aging to assess all current program standards and procedures for in-home services.

LRRA 1: The State Department of Health and Social Services and the Commission on Aging will develop and sign agreements for the exchange of client information and coordination of services by 1982.

Objec ve 2: The Department of Health will assess problems with discharge planning and continuity of care for all long term care providers.

SRRA 2: The Department will the consult with the Iowa Foundation for Medical Care and survey Home Health Agencies on this question.

LRRA 2: The Iowa Foundation for Medical Care will conduct a quality assurance study to evaluate discharge planning in nursing homes and make its findings available to the Health Department by 1982.

Objective 3: The State of Iowa will have a more integrated process for human services planning by 1986.

SRRA 3: The Department of Health will communicate this objective to all relevant state agencies, the legislature, and the Governor's office to solicit their comments and suggestions.

SRRA 3a: Based on the comments and suggestions received the Health Department will draw up priorities for developing a more integrated human service planning process.

E. Cost of Care

The cost of long term health care is an issue running through the analysis of most issues in this chapter. It is a highly visible concern in most public debates on quality, accountability and availability of services. On examining health status and population data, it is easy to see why.

The dominant health problems in the future will be chronic and long term delibilitating illness. Both changing disease patterns and the rapidly growing number of elderly and frail elderly dictate that this will be so. Public money is and will continue to be a majority of all funding for long term health care, most likely growing as the cost of care increases beyond individual means Thus, the issue is actually cost-containment.

The Congressional Budget Office indicates that government expenditures for nursing home care alone will double by 1985, approaching 22 billion dollars, and that 2.5 million more nursing care beds, twice the present number, will be needed if present trends and policies do not change. (42) Costs in Iowa are presented in tables 13 and 14 or have been previously cited.

No separate goals for cost are presented here. Many of the objectives above speak to the range and effectiveness of services, both significant variables affecting cost. The objectives and actions concerning reimbursement address the accountability of providers, the third important factor in cost and cost containment. As more analysis is done, separate cost objectives may be developed.

- The Effect of Statewide Policies on Cost -

Reimbursement

Most discussion of problems with cost associated with reimbursement focus on treatment of interest, depreciation, inflated sales prices and payments to

investors. Concerns have been raised by HSAs and other that:

1. Medicaid provides no limit on interest charges (other than the per diem cap);

2. Medicaid cash payments for depreciation are not invested in the facility but used to cover principal payments and make payment to investors;

3. Mediciad has not assessed inflated sales prices in reimbursing for property costs.

The Department of Social Services has filed a rule which would require independent assessment of the value of a facility. Reimbursement would be based on the lower of sales price or assessed value (unless the sales price were nominal as to a charitable organization). Depreciation payments would be made on the new value of the facility minus any previous depreciation paid.

The major criticism of present reimbursement is that is creates a large cash flow based mainly on the real estate investment involved and not on services provided. This is an incentive for rapid turnover and re-financing of homes, with investors taking as much money out in the mean time as possible and still maintain minimum quality. Profit is not related to service given.

Recently proposed Medicare regulations requiring extensive, standardized cost auditing and service data of home health agencies could add much to administrative costs, especially for smaller agencies. There has been very little publicity regarding these proposals. The Health Department has responded as quickly as possible that the proposed rules should not be implemented. Because the last date for comments was April 30, it is not certain how many other comments can or will be sent in objecting to these rules.

Quality Assurance and Accountability

The effect of compliance with licensure and certification on the cost of care has not been carefully assessed. It has been observed that present licensure surveys are cumbersome and time consuming to administer, both for surveyors and facilities. Present survey time is from one and a half to three days per facility.

Cost Containment and Control of Capital Expenditures

It has been suggested that Certificate of Need has contributed to rising nursing home costs, because providers have a franchised monopoly in an area. There is no hard evidence to support this. Also, as noted before, total public reimbursement for nursing home care has increased more slowly than other services.

Direct Service Policies and Efforts

No disproportionate inceases in the cost of direct public services have been noted. Most programs are now operating under budget cuts or freezes. One possible effect of public provision of service has already been noted for home health care, with Iowa recording the lowest per visit Medicare charge in the country in 1978.

PERCENT DISTRIBUTION OF NURSING HOME RESIDENTS WITH SPECIFIC PRIMARY DIAGNOSES, REASON FOR ADMISSION, CHRONIC CONDITIONS, FUNCTIONAL IMPAIRMENTS, AND DEPENDENCY: UNITED STATES, 1977 [a]

Primary Diagnosis	% of All Residents
1. Diseases of the circulatory system	39.6
- arteriosclerosis	20.3
- stroke	7.9
- other	11.4
2. Mental disorders and senility without psychosis	20.4
- chronic brain syndrome	7.3
- psychosis other than senile	4.4
- other	8.7
3. Diabetes	5.5
4. Arthritis and rheumatism	4.3
5. All other	23.3
6. Unknown	6.9
	100.0

Reasons for Admissions	% of All Residents
1. Poor physical health	78.0
2. Mental illness	6.7
3. Social reasons	5.4
4. Economic or other reason	3.8
5. Mental retardation	3.7
6. Behavioral problem	2.0
	99.6

Chronic Conditions and Impairments	% of Residents with Condition [b]
1. arteriosclerosis	47.0
2. heart trouble	34.4
3. senility	32.0
4. chronic brain syndrome	25.0
5. arthritis and rheumatism	25.0
6. constipation	24.0
7. hypertension	20.9
8. edema/chronic dermatitis	17.9
9. stroke	16.4
10. diabetes	14.5

Functional Impairments	% of Residents Impaired [b]
1. No dentures	37.5
2. Depressed or withdrawn	35.3
3. Agitated, nervous, hyperactive	33.8
4. Vision	28.4
5. Hearing	26.7
- partially impaired	21.7
- severely impaired or completely lost	5.0
6. Speech	23.4
- partially impaired	12.3
- severely impaired or completely lost	11.1
7. Abusive, aggressive or disruptive	17.0
8. Wandering	11.4
9. Communication	14.2
- nonverbal	9.8
- does not communicate	4.4

a. National Nursing Home Survey - 1977 Summary for the United States, DHEW Pub. No.(PHS) 1794, Office of Health Research, Statistics, and Technology, National Center for Health Statistics, Hyattsville, MD, July 1979, Tables 20, 21 and 22.

b. Percents add up to more than 100 because residents had more than one condition or impairment.

Selected chronic conditions causing limitation of activity, according to degree of limitation, sex, and age: United States, 1976

(Data are based on household interviews of a sample of the civilian noninstitutionalized population)

Activity limitation, sex, and age	Number of persons limited in activity	Chronic condition									
		Arthritis and rheumatism	Heart conditions	Hypertension without heart involvement	Diabetes	Mental and nervous conditions	Asthma	Impairments of back or spine	Impairments of lower extremities and hips	Visual impairments	Hearing impairments
		Percent of persons limited in activity because of specified condition									
All degrees of activity limitation											
Both sexes, all ages	30,175,062	16.8	15.7	6.9	5.1	4.9	4.8	7.5	6.1	5.4	2.5
Under 17 years	2,266,695	*1.0	2.4	*0.3	*1.0	6.7	20.1	3.2	6.9	3.7	5.2
17–44 years	7,512,474	6.8	4.8	3.4	2.3	5.9	5.9	13.9	8.0	4.2	2.7
45–64 years	10,504,689	19.6	19.0	9.0	6.8	5.7	3.4	7.9	5.6	4.0	1.9
65 years and over	9,891,204	24.9	23.4	8.9	6.3	3.0	2.1	3.3	5.0	8.2	2.4
Male, all ages	14,564,509	11.4	16.7	4.8	4.8	4.4	4.9	7.2	6.7	5.7	2.8
Under 17 years	1,279,389	*0.4	*2.5	*0.4	*1.1	8.1	21.2	*1.5	7.4	3.8	5.2
17–44 years	3,777,280	4.9	3.9	2.4	1.8	5.5	5.3	13.3	10.2	5.7	3.2
45–64 years	5,182,145	14.9	22.2	6.8	6.9	4.7	2.7	8.0	6.3	4.8	2.6
65 years and over	4,325,695	16.3	25.3	6.1	6.2	2.0	2.2	2.7	4.0	7.6	2.0
Female, all ages	15,610,553	21.7	14.8	8.9	5.2	5.4	4.8	7.9	5.5	5.0	2.2
Under 17 years	987,306	*1.9	*2.2	*0.2	*0.9	5.0	18.6	5.4	6.2	3.6	5.1
17–44 years	3,735,194	8.8	5.7	4.5	2.7	6.3	6.5	14.5	5.8	2.6	2.1
45–64 years	5,322,544	24.2	15.9	11.1	6.7	6.6	4.0	7.9	4.9	3.2	1.2
65 years and over	5,565,509	31.6	22.0	11.1	6.4	3.8	2.0	3.8	5.7	8.6	2.7
Limited but not in major activity											
Both sexes, all ages	7,495,791	13.0	6.7	5.2	3.2	3.4	7.2	8.0	8.2	6.1	4.6
Under 17 years	1,087,587	*1.3	*3.0	*0.5	*1.4	6.1	19.1	5.4	9.3	4.3	5.6
17–44 years	2,843,947	7.2	3.1	2.9	2.4	3.7	8.2	12.2	10.8	5.6	4.1
45–64 years	2,264,578	18.4	8.8	7.8	4.9	2.6	3.8	6.9	6.5	4.7	4.2
65 years and over	1,299,679	25.7	14.0	9.6	3.4	*1.6	*0.9	3.0	4.9	11.2	5.6
Limited in amount or kind of major activity											
Both sexes, all ages	15,210,160	18.3	16.3	7.8	5.0	4.7	4.6	8.8	5.3	4.2	1.8
Under 17 years	1,058,928	*0.7	*1.9	*0.2	*0.7	7.5	22.6	*0.7	4.2	*1.7	4.9
17–44 years	3,721,693	6.8	5.4	4.0	2.3	5.4	4.7	16.5	6.6	3.2	1.8
45–64 years	5,671,034	20.7	19.9	9.5	6.9	5.3	3.4	9.3	4.8	3.2	1.2
65 years and over	4,758,505	28.4	23.9	10.5	5.9	2.9	1.9	4.1	5.0	6.5	1.7
Unable to carry on major activity											
Both sexes, all ages	7,469,111	17.5	23.4	6.8	7.0	7.0	3.0	4.4	5.6	7.2	1.9
Under 17 years	120,180	*1.7	*1.4	*–	*–	*5.7	*7.1	*4.2	*9.0	*15.1	*3.2
17–44 years	946,834	5.8	7.5	*2.7	*1.9	14.5	*3.7	8.4	5.3	3.7	*1.8
45–64 years	2,569,077	18.2	26.2	8.7	8.1	9.1	2.9	5.8	6.5	5.0	1.4
65 years and over	3,833,020	20.4	26.1	6.8	7.7	3.6	2.7	2.5	5.0	9.2	2.2

SOURCE: Division of Health Interview Statistics, National Center for Health Statistics: Data from the Health Interview Survey.

Reportea in Health - 1978, D.H.E.W., p. 236.

PRIOR LIVING ARRANGEMENT OF NURSING HOME RESIDENTS:
UNITED STATES, 1977

Arrangement	% of Residents
1. Admission from another health facility	54.0
2. Lived with others	23.7
3. Lived alone	13.7
4. Unknown or other	8.3
	99.7

Source: Vital and Health Statistics, Series 13, Number 13, National Nursing Home Survey, Table 23, P. 44.

Table 4

Trends in Disability and Chronic Conditions: United States 1967-1978

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	% Change
1. % of persons with limitation in activity due to chronic conditions	11.5	10.9	11.6	11.8	12.3	12.7	13.5	14.1	14.3	14.3	13.5	14.2	+23
2. % of persons with limitation in major activity due to chronic conditions	8.7	9.2	9.1	8.9	9.3	9.6	10.2	10.6	10.8	10.8	10.4	10.6	+22
3. % of persons under 17 with limitation in activity due to chronic conditions	2.1	2.3	2.6	2.7	2.9	3.0	3.4	3.7	3.7	--	3.4	4.2	+100
4. % of persons 17-44 with limitation in activity due to chronic conditions	7.3	7.5	7.5	7.7	7.8	8.3	8.5	8.8	9.0	--	8.1	9.1	+25
5. % of persons 45-64 with limitation in activity due to chronic conditions	18.9	19.8	19.2	19.8	20.5	21.1	23.3	24.1	23.7	--	23.1	24.3	+28
6. % of persons 65+ with limitation in activity due to chronic conditions	46.3	46.1	42.4	42.1	43.7	43.2	44.1	45.9	46.7	--	43.0	48.2	+4

Source: Current Estimates, Series 10 of the Vital and Health Statistics Series, 1967-1978 compiled by the Office for Health Planning and Development, Iowa State Health Department.

PERCENT AND NUMBERS OF INDIVIDUALS WHO MAY BE ELIGIBLE FOR PROGRAMS FOR INDIVIDUALS WITH DEVELOPMENTAL DISABILITIES BY MAJOR LIFE ACTIVITIES FOR IOWA AS DERIVED FROM THE SIE CENSUS SURVEY

	Capacity for independent living Percent of population 20-64 years	Learning Percent of population 5-64 years	Economic sufficiency Percent of population 20-64 years	Expressive & receptive language Percent of population 5-64 years	Self-direction Percent of population 5-64 years	Self-care Percent of population 20-64 years	Mobility Percent of population 20-64 years
Total-U.S.	1.90	1.64	1.49	1.22	.56	.37	.34
Iowa	1.58	1.50	1.03	1.26	.53	.32	.29
Area 1	778	1,085	507	911	383	157	142
2	1,336	1,771	851	1,488	625	264	239
3	1,275	1,739	831	1,461	614	258	234
4	1,408	1,931	918	1,622	682	285	255
5	1,019	1,378	664	1,157	486	206	
6	892	1,218	582	1,023	430	180	103
7	2,073	2,848	1,351	2,392	1,006	420	300
8	1,784	2,562	1,163	2,152	905	361	327
9	1,759	2,456	1,147	2,063	867	356	322
10	2,930	4,333	1,910	3,388	1,425	593	537
11	4,973	6,730	3,242	5,653	2,378	1,007	412
12	745	1,030	485	865	364	150	136
13	1,600	2,194	1,043	1,843	775	324	293
14	509	681	332	572	240	103	33
15	1,275	1,711	833	1,437	604	258	234
16	1,030	1,399	671	1,175	494	208	189

PERCENT OF NON INSTITUTIONALIZED INDIVIDUALS FROM 5-64 YEARS OF AGE WHO ARE MENTALLY RETARDED, HARD OF HEARING, DEAF, SPEECH IMPAIRED, HAVE A SERIOUS DIFFICULTY SEEING, ARE EMOTIONALLY DISTURBED, OR ORTHOPEDICALLY HANDICAPPED, WHICH CONDITION STARTED PRIOR TO BECOME 22 YEARS OF AGE

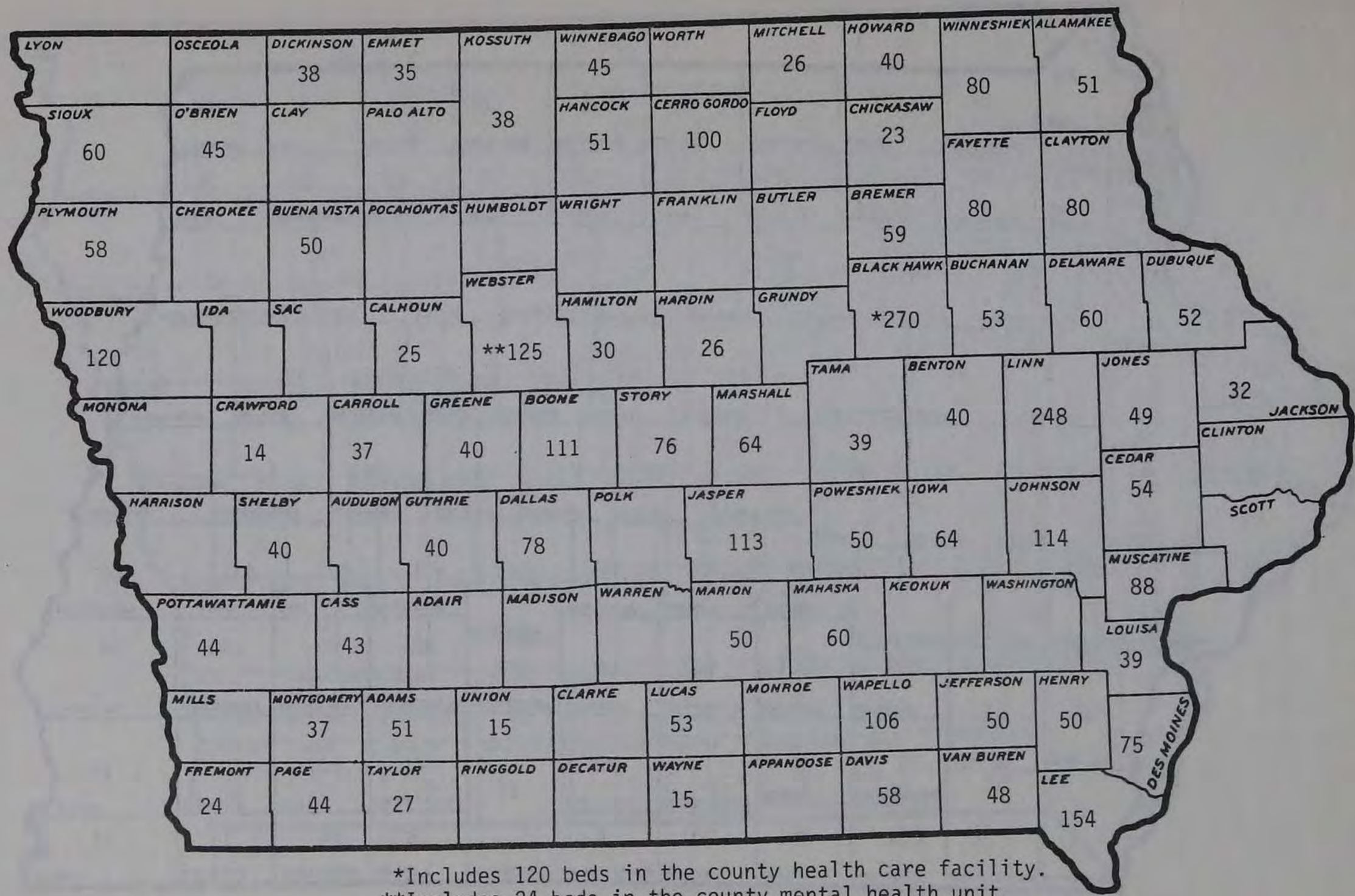
	Total population 5-64 years		Ment. ret.	Hard of hear.	Deaf	Speech Impair.	Diff. Seeing	Emot. Dist.	Orthop. handic.	Total
	Number	%	%	%	%	%	%	%	%	%
Total U.S.	181,848,000	100	.43	.28	.09	.09	.21	.13	.37	1.60
Iowa			.43	.28	.10	.06	.29	.10	.24	1.50
The following represents numbers of individuals based on the above percent.										
Area 1	72,336		311	202	72	43	209	72	173	1085
2	118,102		509	330	118	70	342	118	283	1771
3	115,978		498	324	115	69	336	115	278	1739
4	128,789		553	360	128	77	373	128	309	1931
5	91,869		395	395	91	55	266	91	220	1378
6	81,235		349	227	81	48	235	89	194	1218
7	189,876		816	531	187	113	550	189	455	2848
8	170,853		734	478	170	102	495	170	410	2562
9	163,760		764	458	163	98	474	163	393	2456
10	268,912		1106	752	268	161	179	268	645	4033
11	498,681		1929	1256	448	269	1301	448	1076	6730
12	68,728		295	192	68	41	199	68	164	1030
13	146,290		679	409	146	87	424	146	351	2194
14	45,465		195	127	45	27	131	45	109	681
15	114,075		490	319	114	68	330	114	273	1711
16	93,277		401	261	93	55	270	93	223	139

Number and percent distribution of nursing home residents by dependency in activities of daily living and index of dependency in activities of daily living, according to selected health statuses: United States, 1977—Con.

Health status[1]	All residents	Dependency in activities of daily living						Index of dependency in activities of daily living[2]							
		Requires assistance in bathing	Requires assistance in dressing	Requires assistance in using toilet room	Mobility—walks only with assistance or is chairfast or bedfast	Continence—difficulty with bowel and/or bladder control	Requires assistance in eating	Not dependent in bathing, dressing, using toilet room, mobility, continence, or eating	Dependent in only 1 activity	Dependent in bathing and 1 additional activity	Dependent in bathing, dressing, and 1 additional activity	Dependent in bathing, dressing, using toilet room, and 1 additional activity	Dependent in bathing, dressing, using toilet room, mobility, and 1 additional activity	Dependent in all 6 activities	Other[3]
	Percent distribution														
Total	100.0	86.3	69.4	52.5	66.1	45.3	32.6	9.6	12.4	12.2	8.5	9.6	15.6	23.3	8.9
PRIMARY REASON FOR CARE															
Poor physical health[4]	100.0	90.2	74.8	59.1	75.0	49.6	36.2	5.8	9.9	11.1	8.7	10.7	17.9	26.4	9.4
Mental illness	100.0	70.8	48.9	26.5	24.5	27.7	20.5	26.2	22.2	17.7	6.6	*	*	12.4	*
Mental retardation	100.0	79.1	55.9	29.4	31.6	32.3	18.0	17.2	21.2	19.9	*	*	*	*	*
Behavioral problem	100.0	87.6	75.6	48.9	43.9	51.2	36.4	*	*	*	*	*	*	20.3	*
Social reason	100.0	69.5	45.4	24.8	42.9	25.3	15.6	22.8	22.7	17.4	*	*	8.2	9.2	8.3
Economic or other reason	100.0	63.1	39.3	26.5	34.2	24.7	15.2	32.3	22.2	12.1	*	*	*	12.0	*
PRIMARY DIAGNOSIS AT LAST EXAMINATION															
Diseases of the circulatory system															
Total	100.0	90.2	75.6	58.0	72.3	51.1	36.0	6.0	10.1	11.6	9.0	10.0	16.9	27.7	8.6
Congestive heart failure	100.0	89.9	72.5	52.6	69.8	47.6	25.6	*	11.8	14.2	*	10.3	17.8	20.4	10.3
Arteriosclerosis	100.0	91.1	76.1	56.8	69.8	51.9	36.9	5.5	10.1	12.6	9.7	9.7	15.6	28.1	8.7
Hypertension	100.0	76.7	58.6	33.8	53.5	31.2	19.6	15.8	17.0	16.9	*	*	*	12.7	*
Stroke	100.0	95.8	87.8	79.3	90.2	64.3	50.4	*	5.1	*	6.4	10.1	24.8	40.8	6.8
Heart attack, ischemic heart disease	100.0	91.2	67.4	48.2	65.4	38.5	28.6	*	*	*	*	*	*	*	*
Other	100.0	83.3	66.0	50.6	73.3	45.5	27.4	*	*	*	*	*	*	20.8	*
Mental disorders and senility without psychosis															
Total	100.0	81.6	64.8	44.8	47.1	43.1	32.4	15.5	15.3	14.3	8.3	6.1	10.6	23.1	6.8
Senile psychosis	100.0	88.5	81.5	59.0	59.7	65.1	47.4	*	*	*	*	*	*	34.5	*
Other psychosis	100.0	61.4	39.6	15.5	20.2	17.6	10.0	34.9	22.1	17.6	*	*	*	*	*
Chronic brain syndrome	100.0	92.7	81.8	65.8	65.3	57.9	48.8	5.9	8.4	9.5	9.6	8.8	14.4	35.7	7.6
Senility without psychosis	100.0	95.0	75.8	55.1	63.6	58.6	37.8	*	*	*	*	*	*	32.5	*
Mental retardation	100.0	79.7	55.7	34.4	31.6	33.7	22.7	17.9	21.3	18.7	*	*	*	14.1	*
Alcoholism and other mental disorders	100.0	65.9	44.4	*	35.3	23.1	*	25.5	23.1	*	*	*	*	*	*
Other diagnoses[5]															
Total	100.0	86.9	67.9	53.0	72.6	42.0	29.9	7.9	12.4	11.9	8.2	11.7	17.6	19.4	11.0
Diseases of the musculoskeletal system and connective tissues: Arthritis and rheumatism	100.0	88.8	70.0	53.2	83.2	28.4	26.2	*	*	13.1	10.4	18.0	17.7	12.7	13.6
Diseases of the nervous system and sense organs: Parkinson's disease	100.0	95.4	78.1	66.8	83.0	53.8	47.9	*	*	*	*	*	*	33.9	*
Accidents, poisonings, and violence:															
Hip fracture	100.0	89.7	81.9	73.7	93.9	46.3	29.4	*	*	*	*	18.1	27.6	20.4	*
Other bone fracture	100.0	94.2	77.4	59.9	77.7	*	*	*	*	*	*	*	*	*	*
Endocrine, nutritional, and metabolic diseases: Diabetes	100.0	86.0	62.7	44.3	66.1	38.4	25.5	8.9	17.6	13.6	7.4	10.0	15.8	15.6	11.2
Neoplasms: Cancer	100.0	87.2	68.4	51.3	68.9	45.8	33.1	*	*	*	*	*	*	23.6	*
Diseases of the respiratory system:															
Total	100.0	77.5	50.9	39.5	59.2	34.5	22.0	16.8	19.2	*	*	*	*	*	*
Diagnosis unknown[6]															
Total	100.0	75.1	55.7	41.7	56.1	33.6	26.2	20.1	16.1	10.7	7.5	7.5	13.6	17.0	7.5

Table 7

Location of County Facility LTC Beds.
Figures taken from 1979 State Mental Health Plan.

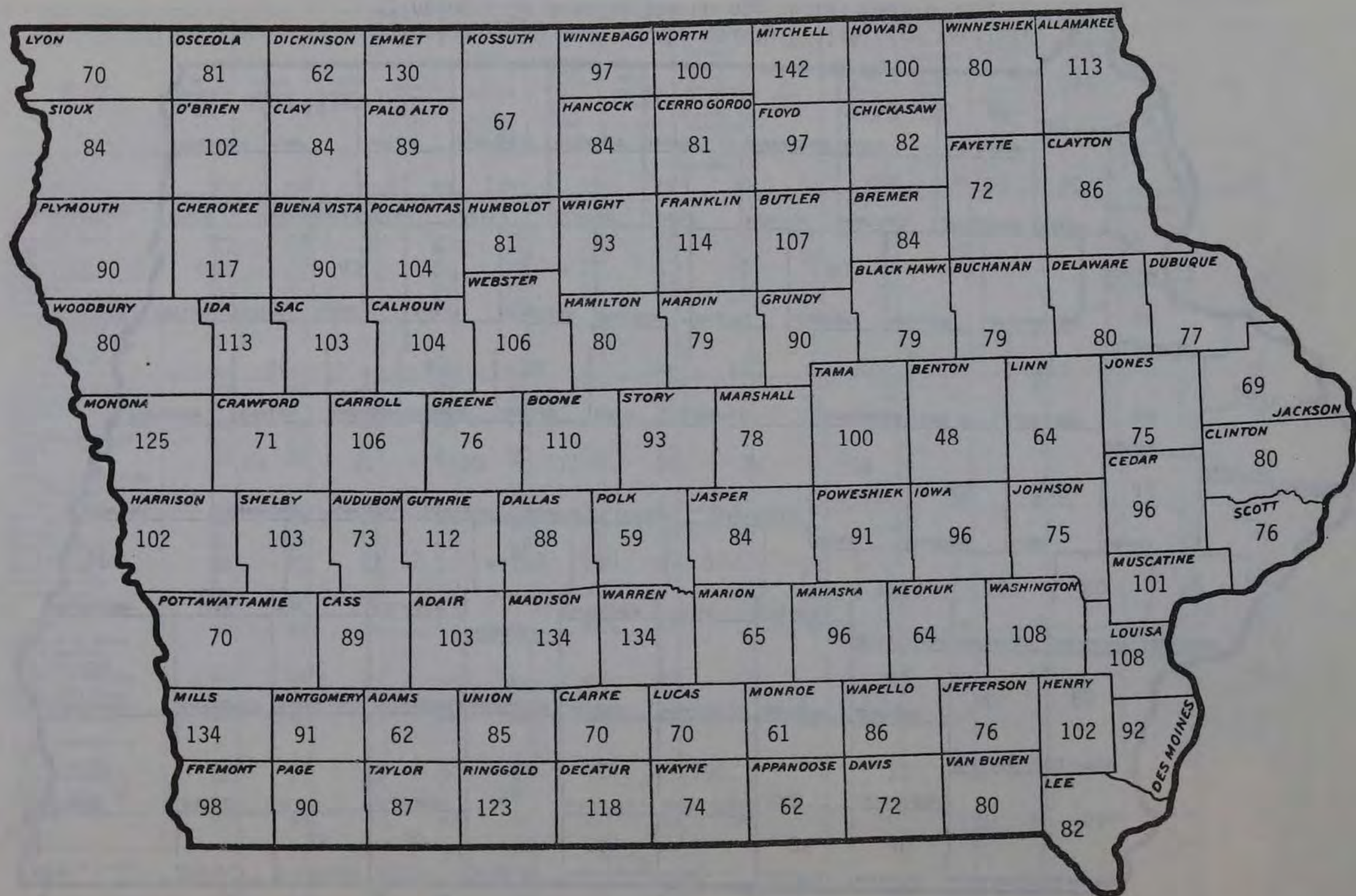


*Includes 120 beds in the county health care facility.
**Includes 24 beds in the county mental health unit.

CP-14607

Table 8

Intermediate Care Nursing Beds (Existing and Approved - April 1979) Per 1000 Elderly (as of July 1978)-Medicare Enrollees



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Residential Care Beds (Existing and Approved as of April, 1979)
per 1000 Elderly (as of July, 1978)-Medicare enrollees

Table 9

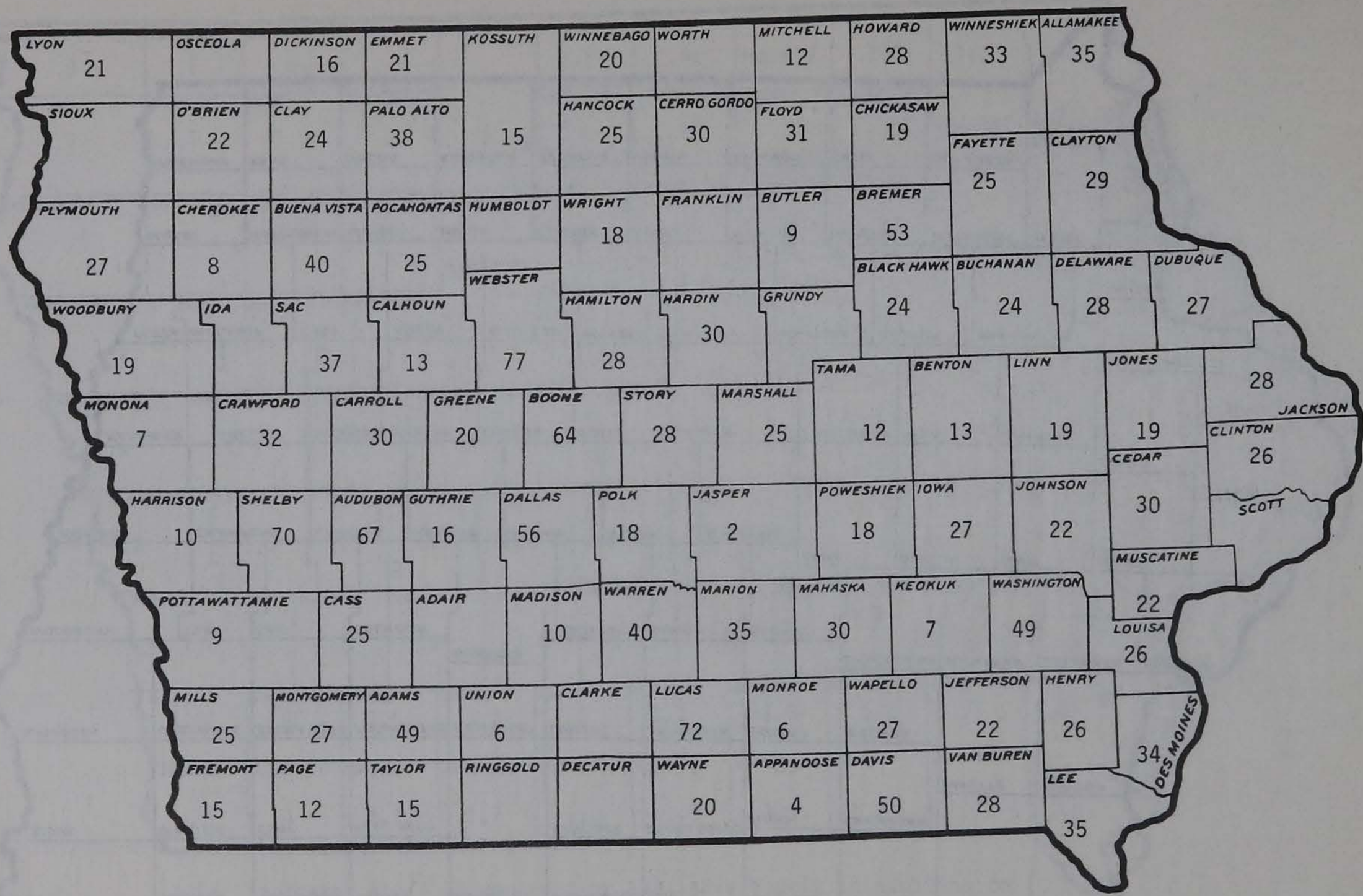

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Table 10

Skilled Nursing Beds (Existing and Approved - April 1979)
Per 1000 Elderly (as of July 1978) - Medicare Enrollees

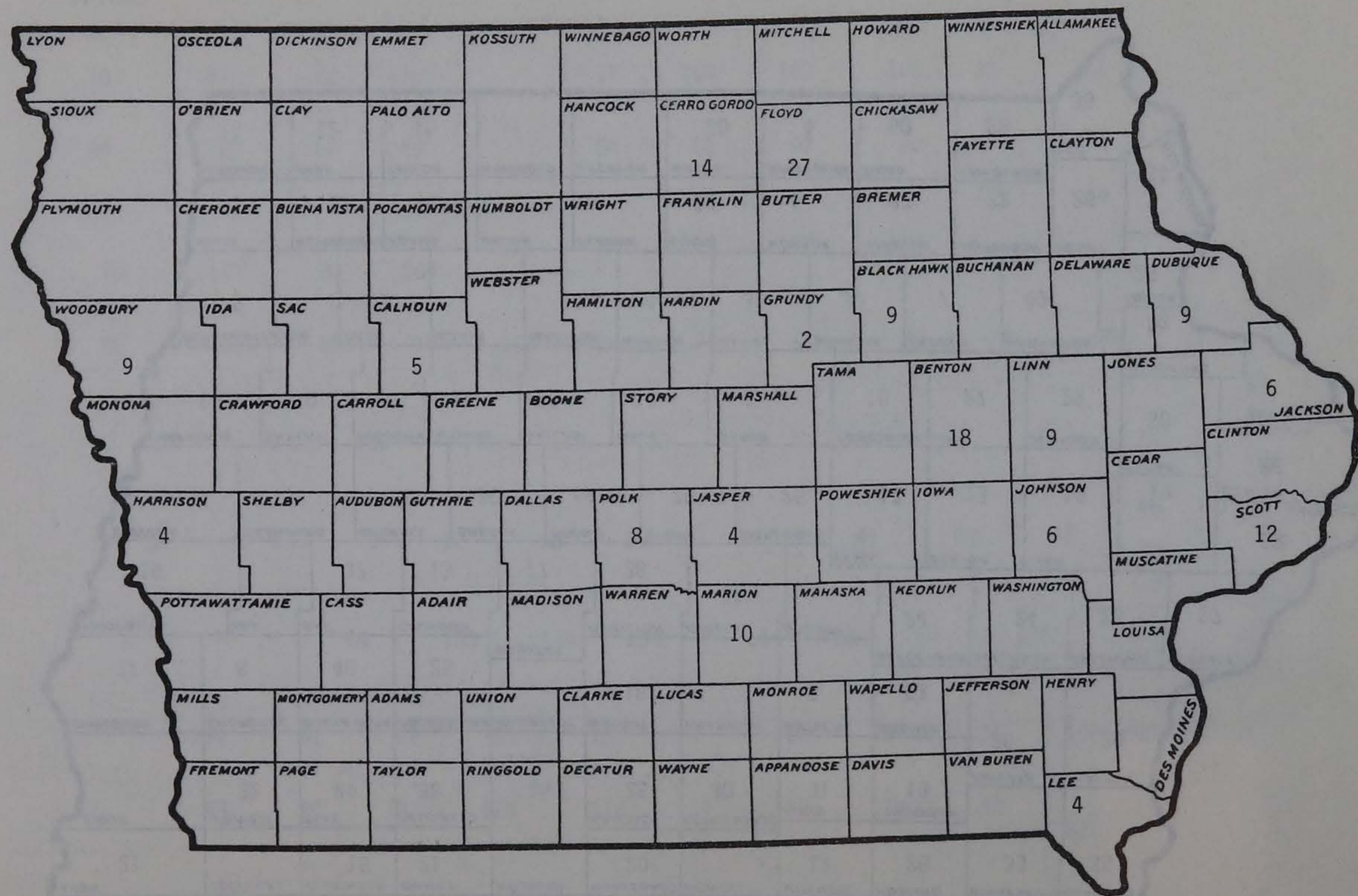

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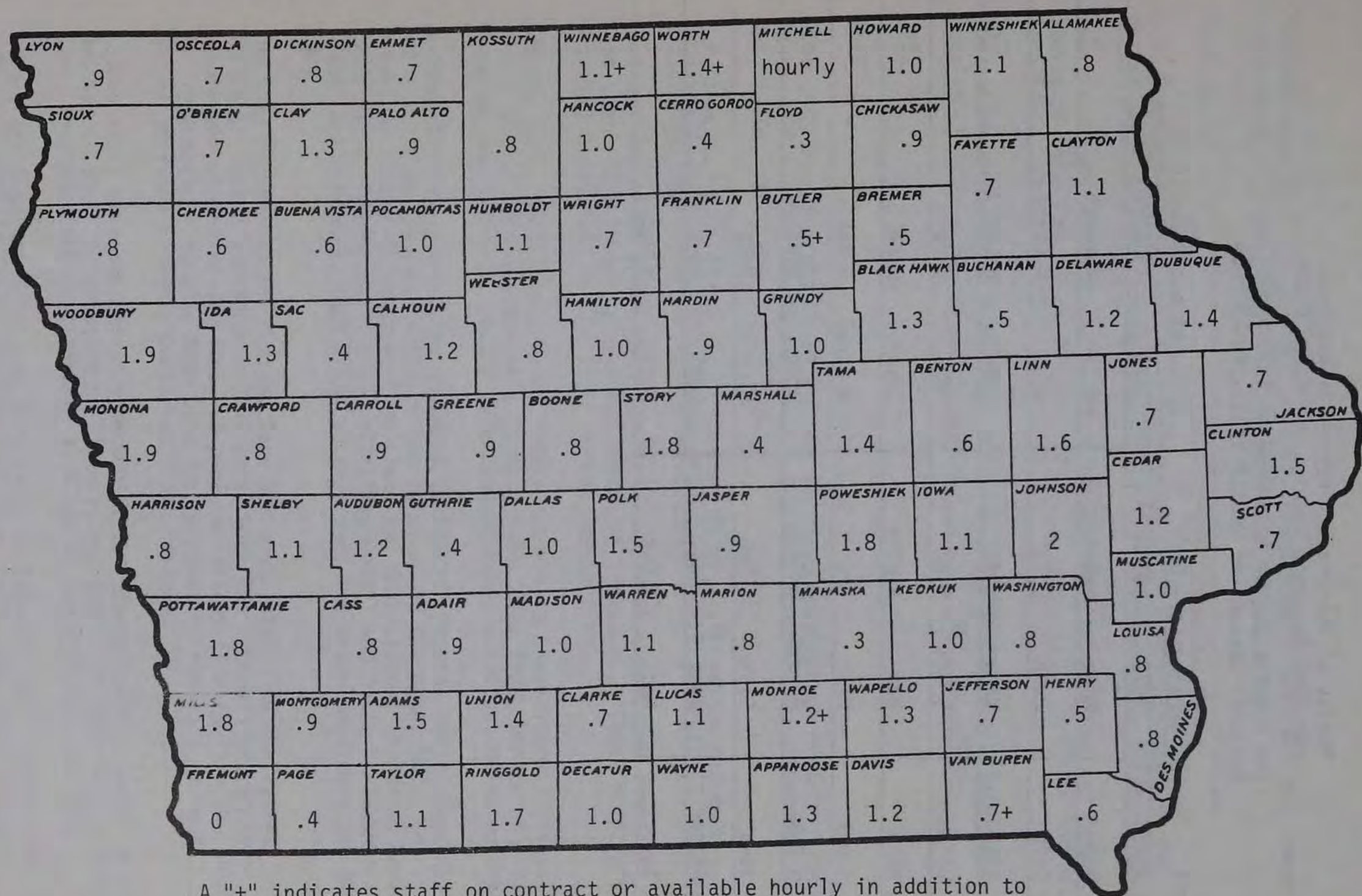
Table 11

Public Health Nurses and Visiting Nurses (as of April 1979) per 1000 elderly (as of July, 1978) - Medicare Enrollees



A "+" indicates staff on contract or available hourly in addition to regular staff.

CP-14607

Table 12

Ratios of Nursing and Personal Care Beds
Per 1000 Resident Population 65 and Older

Ten Highest States According to 1973 and 1976
National Center for Health Statistics Surveys

	Total		Nursing Care Beds		Personal and Other	
	1973	1976	1973	1976	1973	1976
1.	Minn	Neb	Minn	Neb	N Dak	Vermont
2.	Wisc	Colo	Okla	Colo	Wisc	N Carol
3.	Iowa	Wisc	Wash	Wisc	Iowa	N Dak
4.	N Dak	Vermont	S Dak	Minn	Kans	Virg
5.	S Dak	Minn	Neb	Alaska	Calif	Mich
6.	Neb	S Dak	Wisc	Tex	N Carol	S Dak
7.	Okla	N Dak	Alaska	Okla	Oreg	Kent
8.	Wash	Iowa	Colo	S Dak	Minn	Mass
9.	Colo	Alaska	Iowa	Iowa	Kent	Iowa
10.	Mass	Tex	Mass	N Dak	Neb	N Hamp

Footnotes

1. "Is the Least Restrictive Environment Always Best?" Hospital and Community Psychiatry, February 1980, pp. 97, 98.

2. Ibid, p. 98.

3. U.S. General Accounting Office Hospice Care - A Growing Concept in the United States, General Accounting Office, Washington D.C., March 6, 1979.

4. American Hospital Association, "Instructions and Definitions for Annual Survey of Hospitals, 1976 American Hospital Association Guide to the Health Care Field, 1977 Edition".

5. Iowa State Department of Health, Health Facilities Division, Rules and Regulation Setting Minimum Standards for Health Care Facilities.

6. Ibid.

7. Ibid.

8. "Changing Disease Patterns, Changing Values - Problems of Geriatric Care In the U.S.A. Margolis, Emmanuel. M.D., MPH, Medical Care, November, 1979 Vol. XVIII, No. 11, pp. 1119-1130.

9. L.E. Kopolow, A.B. Brands, J.L. Burton, et al., Litigation and Mental Health Services, National Institute of Mental Health, Rockville, MD., 1975.

10. In Iowa, the draft State Plan for Mental Retardation set out a goal (A.6) that there be voluntary, informed choice of treatment. These principles are also recognized in the State Mental Health Plan.

11. Gibson, R.M., and Fisher, C.R.: "National Health Expenditures, Fiscal Year 1977," Social Security Bulletin 41(7): 3-20, July 1978, Office of Policy Planning and Research, Health Care Finance Administration, selected data.

12. A complete list of Statutes and Acts includes: Federal Social Security Act - Title VI (Grants to States for Services to the Aged, Blind and Disabled), Title XI (General Provisions and Professional Standards Review), Title XVIII ("Medicare"), Title XIX ("Medicaid") and Title XX (Grants to States for Services, Public Law 93-647) and; The Older Americans Act of 1965.

13. The Iowa Foundation for Medical Care has contracted with the federal office of Health Education and Welfare, with the approval of the Iowa Department of Social Services, to perform reviews to establish the need for intermediate nursing home care for purposes of Medicaid payments. Social Services formerly performed these reviews.

14. Illowa staff have not had an opportunity to respond to this latest draft. Because of their orientation to Illinois and Region V, and limited staff time, they have not participated as often as the Midlands and Iowa.

15. Reform and Regulation in Long Term Care, V. Laporte and J. Rubin, eds., Praeger Special Studies, Praeger Publishes, 1979, 1383 Madison Avenue, New York, New York, 10017.

16. M.I. Roemer, A.T. Moustafa, C.E. Hopkins, "A Proposed Hospital Quality Index - Hospital Death Rates Adjusted For Case Severity" Health Services Research 3, No. 2 (1968) p.115.

17. Data compiled from Federal Medicare reports by the Office for Health Planning and Development.

18. The National Arthritis Foundation figures are 31,600,000 persons with all types of arthritis, 16,000,000 with osteoarthritis, and 6,500,000 with rheumatoid arthritis.

19. NCHS Report, Vital and Health Statistics Series 10, No. 124, Prevalence of Chronic Skin and Musculoskeletal Conditions: United States, 1976, p. 12.

20. Indiana State Health Plan for 1980-85, Vol. 1, Part B, p. 65, Indiana State Board of Health, 1330 West Michigan St., Indianapolis, Indiana 46206.

21. Healthy People, DHEW (PHS) Pub. No. 79-55071.

22. Iowa 1980 HSP, pp. 77-83; Illowa 1980 HSP, pp.67-97; Midlands HSP, pp. 3-6 to 3-14.

23. 1979/80 Progress Report - State of Iowa Plan for Mental Health Services, Iowa Mental Health Authority, University of Iowa, Oakdale, Iowa, p. 107.

24. Ibid, pp. 30-32.

25. 1979-80 Comprehensive State Plan for Substance Abuse, pp. 34-70.

26. Ibid, p. 66.

27. Ibid, p. 68.

28. National Center for Health Statistics, Edentulous Persons: U.S. - 1971, DHEW, Series 10, No. 89.

29. Survey of Iowa Dentists and Nursing Homes Regarding Dental Care of the Elderly and Title XIX, Iowa College of Dentistry, University of Iowa, Published by the Iowa Gerontology Center, Oakdale, Iowa, p. 29.

30. U.S. D.H.E.W., Public Health Service, National Center for Health Statistics Vital and Health Statistics, Series 13.

31. Katz, S. et al: Progress in Development of the Index of ADL, Gerontologist 10 (pt. 1) 20-30, Spring 1970.

32. The review procedures of the Iowa Foundation for Medical Care have been criticized because they establish centralized "desk" reviews with less on-site contact and consultation with the patients and facilities. It is not clear what "district review" will include.

33. Orem, Dorothea E., Nursing: Concepts of Practice (McGraw-Hill, N.Y., 1971. Also see: Horn, Barbara and Swain, Mary Ann, Criteria: Measures of Nursing Care Quality, D.H.E.W. National Center for Health Statistics, 3700 E-W Highway, Hyattsville, Md., 1978, Wandelt, M.A. and Stewart, D.C., Slater Nursing Competencies Rating Scale, N.Y. Appleton - Century - Crafts, 1975, and Phaneuf, Maria (Professor, Department of Public Health Nursing Wayne State University, Detroit Michigan). The Nursing Audit, N.Y. Appleton - Century - Crafts, 1972.

34. Draft Standards - Gerontological Nursing Division, American Nurses Ass'n, 1976.

35. Health Facilities Licensing requires a comprehensive plan of care be established for each patient (following federal regulations for certification) though they have limited authority and no resources to ensure the plan is followed. The Iowa Foundation for Medical Care recognizes non-medical principles and the need for plans of care, but have no criteria for the plans or the outcome of care.

36. IFMC Quarterly Reports on review activities - 1979.

37. Hammond, John "Home Health Care Cost Effectiveness" Public Health Reports July- August 1979, Vol. 94, No. 4 pp. 305-311.

38. Each county requests different justification for additional personnel. Some are more conservative than others.

39. See Evaluation of the 1978 Iowa State Health Plan, Quarterly Report No. 3 by Jayme Whitehead and Daniel Jacobi. They also note that the existing structure of Regional Public Health Nurse Supervisors is being strained by the increase in local nurses, and that a change in roles or the structure will be necessary.

40. Health Care Financing Notes - Medicare: Use of Home Health Services, 1978. Published by the Health Care Finance Administration.

41. The committee structure of the Iowa Legislature, wilth parallel Human Resource Committees in both chambers is an asset already.

42. Older American Reports, Vol. 4, No. 14, April 2, 1980.

Use of Intermediate Nursing Care Facilities In Iowa - 1979

Age of Residents	Number		%		Rate/1000 Population*	
	Male	Female	Male	Female	Male	Female
<65	936	1,248	3.4	4.5	.74	.97
65-74	1,274	2,068	4.6	7.4	13.6	17.3
75+	5,594	16,719	20.1	60.0	95.9	160.5
Total	7,804	20,035	28.1	71.9	45.2(65+)	84.1(65+)
	27,839		99.9		68.3(65+)	

*O.P.P. Projections

Use of Residential Nursing Care Facilities In Iowa - 1979

Age of Residents	Number		%		Rate/1000 Population	
	Male	Female	Male	Female	Male	Female
<65	1,598	1,221	23.6	18.0	1.3	.9
65-74	612	578	9.0	8.5	6.5	4.8
75+	874	1,886	12.9	27.9	14.9	18.9
Total	3,084	3,685	45.5	54.4	9.8(65+)	11.0(65+)
	6,769		99.9		10.5(65+)	

Source: 1978-79 Iowa Department of Health Licensure Surveys

I.Q.	Functional Abilities (Activities of Daily Living)	Supervision Required (for behavioral problems)		Health Care Required		Appropriate Setting	Specific Services Required
		Now	Prognosis	Now	Prognosis		
ildly etarded	All major Activities of Daily Living or minor limitations	Minimum	Improve or Stable	Minimum or Moderate	Improve or Stable	Family, supervised apartments; (ICF or RCF for short periods if health problems such as epilepsy or endocrine disorders)	Education, training for family/ guardian, minimum health support, counseling
ildly etarded	All major Activities of Daily Living or minor limitations	Moderate	Improve or Stable	Minimum or Moderate	Improve or Stable	Family, day or respite care, group home, supervised apartments; brief ICF, RCF.	Education, day programs, training for family/guardian, behavior modification, minimum health support
oderately etarded	All major Activities of Daily Living or minor limitations	Minimum or Moderate	Improve or Stable	Minimum or Moderate	Improve or Stable	Family, residential facility, supervised apartment, group home; brief ICF or RCF.	Training in self care, training for family/guardian, behavior modification, minimum health support, sheltered workshop, activity center
oderately etarded	All but one or two Activities of Daily Living	Moderate	Stable	Minimum or Moderate	Improve or Stable	Family, residential or intermediate care facility, child care facilities.	Training in self care, more extensive training and support for family/guardian, moderate health support, behavior modification, sheltered workshop, activity center
oderately etarded	Unable to perform more than two Activities of Daily Living	Moderate or Substantial	Stable or Improve	Moderate	Improve or Stable	Residential or intermediate care facility, family, group home, child care facilities.	Training in self help, extensive family training and support, behavior modification, activity center
everely and rofoundly etarded	Able to perform three or fewer Activities of Daily Living	Substantial or Complete	Stable or Improve	Moderate Substantial, or Complete	Stable or Improve	Intermediate care facility, state school, occasionally a family, child care facilities	Extensive self care and behavior modification, language development, extensive health care support

- Developed in consultation with the State MR Core Advisory Committee -

Table

Chapter Seven

Mental Health and Substance Abuse

Mental Health

Services for mental health are provided in many settings. Examples of inpatient settings are mental health institutes, psychiatric units in general hospitals, and county care facilities. While mental health institutes and psychiatric units in general hospitals provide more comprehensive, intensive acute care, county care facilities provide more general and less intensive care.

In recent years there has been a philosophical shift from institutionalizing people to de-institutionalization or normalization. The issue being the most normal, least restrictive setting possible for each particular person. This brings to the forefront several community needs that need developing or strengthening if this is to be accomplished. First of all communities need to develop appropriate community based alternatives to institutions. Second is the need for communities to have adequate after-care programs for these individuals with the support of sufficient follow-up services by the institutions from which the people come. The necessity of coordination of both inpatient and outpatient services is important to reach the goal of comprehensive mental health services to all residents in Iowa. (For more information see Long Term Care Chapter discussion of community support projects and trends).

GOAL: INCREASED AVAILABILITY OF AND ACCESSIBILITY TO A FULL RANGE OF MENTAL HEALTH/SUBSTANCE ABUSE SERVICES IN A VARIETY OF SETTINGS TO ENSURE APPROPRIATE CARE.

Iowa's thirty-two community mental health centers make services available to over 90% (eighty-four counties) of the State's population. These centers are locally financed and controlled as well as being incorporated as nonprofit agencies. Current total operating budget exceeds five million, of which a large portion comes from local county taxes. All community mental health centers charge clients on a sliding scale-fee schedule which takes in account the clients ability to pay and then pro-rates the charge. As in all health care services, the method of reimbursement of services has a major impact on decisions as to where services will be obtained. In accordance with state standards these centers provide outpatient, consultation, and education services. There are six centers which receive federal funds and the additional services required by these monies vary according to the type of federal grant received. Examples of this would be those Iowa centers (Dubuque - Jackson Mental Health Center, Northwest Iowa Mental Health Center, River Bluffs) receiving funds under P.L. 88-164 which requires them to provide the following services in addition to those mandated by state requirements: outpatient, consultation and education, inpatient, 24-hour-emergency, and partial hospitalization services. In the fiscal year 1976-77 there were a total of 17,326 new admissions with a total of 36,013 cases seen at these community mental health centers. This represents an average of 7.19 in urban areas, 5.85 in non-poverty rural areas, and 4.27 in the poorest rural catchment areas of clients per 1,000 population receiving services in these centers. (8)

Most people in the mental health field recognize an "irreducible" number of persons who will need long term institutionalization.

There are four Mental Health Institutes in Iowa: Cherokee Mental Health Institute, Clarinda Mental Health Institute, Independence Mental Health Institute, Mt. Pleasant Mental Health Institute. All four institutes are administered, (See end of chapter for figures of MHIs and CMHCs.)

supervised and directed by the Division of Mental Health Resources of the Iowa Department of Social Services. All four are also accredited by the Joint Commission on Accreditation of Hospitals and licensed by appropriate professional and state agencies.

The State of Iowa Plan for Mental Health Services 1979/80 Progress Report lists the following services these institutes provide: comprehensive psychiatric treatment and specialized programs for alcoholism, drug abuse, geriatrics, emotionally disturbed children, and adolescents. Other services include general medical, surgical supportive services, diagnosis and evaluation, outpatient services, community consultation, and after-care services.

Total inpatient admissions have increased from 2,675 in 1976 (1) to 5,397 in 1978. (2) The average daily resident census has reduced from 5,269 in 1956 to 1,115 in 1978. (3) The median length of stay has decreased from 225 days in 1964 (4) to 30 days in 1977. Of the total patients admitted to Mental Health Institutes (MHI) three-fourths are discharged within 60 days, 94% within three months and 98.8% within one year. (5) The 1978 occupancy rates for the MHI's were as follows: Cherokee 76.2%; Independence 75.59%; Clarinda 93.99%; and Mt. Pleasant 85.23%. (6) Outpatient admissions in 1978 was 1,299.

These statistics are indicative of the trend towards short stay inpatient treatment in mental health insitutions. This combined with the decreased length of stay as well as high occupancy rates signifies increased number of people being served by these insitutions.

In addition, many chronically mentally ill are found in county care facilities and nursing homes. Care must be taken to keep these insitutions from replacing the "back wards" previously found in mental health institues.

As a safe guard for mental health patients rights and possible unnecessary institutionalization Chapter 229 of the Iowa Code 1976 provides for the provision of a Mental Health Advocate. "The advocate's responsibility with respect to any patient shall begin at whatever time the attorney employed or appointed to represent that patient as respondent in hospitalization proceedings, conducted under section 229.6 to 229.13, reports to the court that his or her services are no longer required and requests the court's approval to withdraw as counsel for that patient. "(Code of Iowa, Section 229.19) The clerk of court then supplies the advocate with the court's approval of withdrawal of the attorney which turns the responsibility for safeguarding the patients rights over to the advocate. There isn't any clear cut specifications of the roles of the advocate nor has there been any regimented training program designed to train the advocate specific skills or responsibility levels within which he is to perform. Efforts are planned to remedy this situation. The Division of Mental Health Resources and the Iowa Mental Health Authority will be sponsoring in cooperation with attorneys and others interested in the role of advocates, a series of training and orientation workshops starting in October, 1980. The Code of Iowa, Section 229.19 describes the advocate and his role as: "an individual who has demonstrated by prior activities on informed concerned for the welfare and rehabilitation of the mentally ill... to act as advocate representing the interests of all patients involuntarily hospitalized by that court, in any matter relating to the patients hospitalization or treatment under section 229.14 or 229.15... The advocates duties shall include reviewing each report submitted (by the representing attorney of withdrawal as counsel for that patient) pursuant to sections 229.14 and 229.15 concerning a patient whose interests, as a patient, the advocate is required to represent under this

section, and if the advocate is not an attorney, advising the court at any time it appears that the services of an attorney are required to properly safeguard the patients interests."

As pointed out by the Iowa Health Systems Plan there are currently 57 Mental Health Advocates serving 69 counties. In each Judicial District the Mental Health Advocate serves one county with the exception of district 8 where two advocates serve all 14 counties of that district. (See Figure 1.)

The 1979 Code of Iowa, section 135C.1 states that county care facilities "provide accommodation, board, personal assistance, and other essential daily living activities...for reasons of illness, disease, or physical or mental infirmity (to those who) are unable to sufficiently or properly care for themselves but who do not require the services of a registered or licensed practical nurse except on an emergency basis. Examples of outpatient settings are community mental health centers (CMHCs), private offices, outpatient departments of hospitals, and day treatment programs. (7) It might be noted that inpatient care is also required to be provided by federally funded CMHCs.

A priority of the mental hygiene committee is statewide accessibility of community support systems for chronically mentally ill.

The statewide needs and priorities in mental health and substance abuse were proposed to the Statewide Health Coordinating Council by the The State Mental Health Advisory Council and the Commission on Substance Abuse (as developed by staff from the Commission's approved plan).

The above Council and Commission's process for developing the proposed needs consisted of an analysis of:

1) State Mental Health Plan;
2) Iowa Comprehensive State Plan for Substance Abuse;
3) Three Health Systems Plans; and
4) Mental Health in Iowa Recomendations for: Assessible services, Quality services, Coordinated servies, Effective services, Adequate services.

Members of these advisory councils are:

Mental Health

Providers

Dr. Ruth Brandwein
Director, School of Social Work
University of Iowa
Iowa City, Iowa 52242

Vera French, M.D. Director
Community Mental Health
Center of Scott County
1441 West Central Park Ave.
Davenport, Iowa 52804

Mrs. Helen Henderson
4205 Pommell Place
West Des Moines, Iowa 50265

Nonproviders

Mrs. Phillis Christiansen
1402 Main Street
Grinnell, Iowa 50112

Mr. Gilbert R. Eggen
Assistant Vice President
Northwestern Bell Telephone Co.
909 High Street
Des Moines, Iowa 50309

Dr. Elwin D. Farwell
President
Luther College
Decorah, Iowa 52101

Providers	Nonproviders
Richard Bealka, M.D. Director of Children's Unit Mental Health Institute Independence, Iowa 50644	Reverend David Stout, Chairperson First United Methodist Church 10th and Pleasant Streets Des Moines, Iowa 50309
Mr. Don Perkins, Vice Chairperson Resource Manager Rehabilitation Education and Services Branch Department of Public Instruction Farm Bureau Building 507 10th Street, 5th Floor Des Moines, Iowa 50319	Alfred Sump Route 1, Box 175 Clarinda, Iowa 51632
	James F. Hassenfritz 301 North Adams Mt. Pleasant, Iowa 52461

Substance Abuse

Todd Beveridge Indianola, Iowa	George M. Strayer Hudson, Iowa
Tom Ferris Des Moines, Iowa	Kay Dull LeMars, Iowa
Harrison Fisch Sutherland, Iowa	Gwendolyn Fowler Des Moines, Iowa
Calvin Longhibler Council Bluffs, Iowa	Ann Weir Council Bluffs, Iowa
Jacqueline Naylor Charles City, Iowa	

These priorities were substantively included in the SHCC adopted 1980 Statewide Needs and Priorities for the State of Iowa (see Chapter One Priorities for Health and Health Care) for

Prevention/health promotion primary care, acute care inpatient and long term health care systems as they affect:

Mental disorders

a. services to underserved populations (children and youth, elderly, ethnic and racial minorities, handicapped, low income individuals and rural)
b. community based mental health services offering inpatient, emergency, outpatient, pre-screening, follow-up, and consultation/education (including promotion of mental health
c. incorporation of local professional, consumer, and government official input to ensure protection of patient rights in state and local mental health planning, funding, and service delivery
d. integration of all mental health services and integration of those services with other health and human agency services
e. mental health services for the chronically mentally ill ensuring least restrictive environment and planning and funding for ensuring high quality of services in all living environments for the chronically mentally ill.

Substance Abuse

a. quality of existing treatment rehabilitation services statewide
b. expansion of quality prevention/early intervention services including public information
c. increased programing techniques in all phases of service to address special population group needs (children and youth, elderly, women, ethnic and racial minorities, handicapped, low income individuals and rural)
d. enhancement of the Plan Development system as developed by Iowa Department of Substance Abuse.

The analysis of these priorities as to what we now have in the State and what still needs to be developed is addressed below:

Prevention/health promotion, primary care, acute care inpatient and long term health care systems as they affect Children and Youth.

Prevention activities for children should be aimed at both the children and their parents, particularly health programs that offer information and services before children become mentally disturbed and exhibit extreme behavior; such care may help avoid serious consequences of mental illness. It has been estimated that only ten percent of the children who need mental health care receive it. Interference with normal childhood development through recognized stages to adulthood can increase the risk of physical and mental disease. Programs should be developed to help children increase their self-esteem, and build skills to learn to cope with stressful environments. These programs can help children develop and provide them with the confidence and skills to deal with, master, and adapt to stresses of contemporary living. (Source: Proposed National Guidelines, 1978.)

As pointed out by the 1980-85 Iowa Health Systems Plan, "It is important to recognize that mental health problems may be biological and/or psychosocial in origin. Recent research in children has shown that some children are allergic to food additives and demonstrate inappropriate activity levels. Previously it was thought that these children were mentally disturbed. Also, it has been observed that some people diagnosed as schizophrenic were deficient in certain vitamins and trace chemicals. (9) There is conflicting research on mental disorders, the diagnosis of such disorders, the mode of treatment, and how research findings are interpreted. Further research is needed before resources are directed to these areas.

Adequate access to genetic counseling and diagnostic services are necessary to any comprehensive program of preventive mental health care. There are genetic implications of many illnesses such as schizophrenia or bi-polar depressive illness. Further, some of the medications used to treat these illnesses in expectant parents are suspected of affecting the growth and development of the unborn child. (See prevention component for genetic counseling services available for Iowa pl. 151.)

Iowa's Mental Health Authority (IMHA) has identified priority areas which need to be addressed in the State for children and youth. One priority addresses the need for preventive services to local communities for children who are considered high risk. In connection with this priority there is also a need for increased involvement of both families of these children and local agencies for better coordination and acceptance of programs within the community especially to enhance the life of those children who do not need a residential placement.

The IMHA funded a grant for the Des Moines Child Guidance Center aimed at forming a group for preschool children, developing a human services advisory committee for a low-income housing project, and supporting the development of a social services staff at the project. The Des Moines Child Guidance Center has also received an IMHA grant to develop and conduct group sessions (to increase the coping skills of children whose parents were divorced).

The Center will explore the possibilities of conducting a statewide workshop to share the techniques of such a program.

Another area pertaining to mental health of children and adolescents is that of substance abuse. Physical changes, exposure to new school experiences, and pressure from peers and parents can all be stressful experiences. There is a continuing need for parents and providers of children's services to understand the physical and mental developmental stages of childhood and adolescence. By helping both parents and children understand the phenomenon of drug using behavior, personal harm may be avoided.

Increasing the coping skills of children and educating both parents and children of stress related issues is important as children and youth grow in this society. As a part of growth there is a need to have youth and their parents understand the intelligent use of drugs and the reason drugs are available. As an indicator to substance (drugs and alcohol) usage one can analyze and compare substances prevalence rates among children and youth.

In an attempt to compare present substance abuse prevalence estimations for Iowa with similar 1975 data, a sample of adolescents attending school was surveyed concerning attitudes towards substance abuse. This survey was conducted by the Department of Public Instruction (DPI) through the Substance Abuse Prevention/ Education project. The following table records the results of this comparison study:

KNOWLEDGE, USE AND BEHAVIOR OF IOWA YOUTH
REGARDING ALCOHOL AND OTHER DRUGS

Item	1975	1978	Percent Change
	N=3600	N=2865	
Use of Alcohol	61.0%	76.5%	+15.5%
Use of Marijuana	15.0%	23.7%	+8.7%
Use of Drugs Other than Alcohol or Marijuana	8.0%	9.6%	+1.6%
First Use of Alcohol - Age 11 or Under	42.0%	44.0%	+2.0%
First Use of Marijuana - Age 11 or Under	2.0%	2.7%	+.7%
First Use of Other Drugs - Age 11 or Under	2.0%	.9%	(1.1%)
Source of Help Sought for Drug Problems:			
Friend	35.0%	35.0%	No Change
Parents or Guardian	21.0%	24.0%	+3%
Don't Know Where to Seek Help	13.0%	14.0%	+1%
Brother, Sister, Other Relative	9.0%	10.0%	+1%

Sixty percent of all juveniles admitted to drug treatment were abusing three substances, usually including alcohol. The Iowa Comprehensive State Plan for Substance Abuse 1979-1980 identified a key issue in access to treatment for juveniles as a need for coordination between public and private treatment centers.

Values clarification classes have been found beneficial in lowering school dropout and substance abuse of school age children. As the beginning age of abuse of substances continues to lower, these classes should be offered to correspondingly younger children in the schools. Public law 94-142 mandates emotionally disturbed children attend school in the least restrictive environment possible. This means public school personnel need special training in recognizing and working with emotionally disordered children and/or those with substance abuse problems. The health systems plans for Iowa have goals and objectives related to coordination between CMHCs and Area Education Agencies in training of personnel for working with emotionally disordered children. This training should probably include recognition of substance abuse problems and knowledge of available treatment programs.

As reported in the Iowa Comprehensive State Plan for Substance Abuse 1979-1980 there was a less likely occurrance for moderate to severe substance abuse for those students in tenth and twelfth grades, since by that time those subgroup individual abusers had the tendency to drop out of school. Substance abuse affecting the socio-psychological functioning of the student was defined as moderate substance abuse problems in this study while abuse problems which made the individual dysfunctional in terms of socio-psychological adjustment was defined as a serious substance abuse problem.

From this table it is noted there is a marked increase from 1975 to 1978 in the reported use of alcohol and marijuana. This seems to be somewhat misleading when 1975 data is compared to 1978 data in the category of regular to heavy usage. In this category there does not appear to be any increase but rather usage is basically stabilized (28% alcohol regular/ heavy usage and 9% marijuana regular/heavy use for 1978). Regular usage is defined as once/week with heavy usage being defined as three/week or more.

While this evidence suggests in the general school population abuse patterns have not increased there are those juveniles in the state juvenile institutional system (many of whom have left school prior to institutionalization) not included in this general school population whose abuse patterns have increased. (10)

Fifty-four percent (54%) or 373 of the 687 juvenile substance abuse diagnosed institutional admissions in fiscal year 1978 were moderate to severe abusers of both alcohol and other drugs. The figure was 53% in fiscal year 1977.

While only 2.5% of clients entering treatment centers were under 19 years of age in 1978, data from the juvenile justice system, DPI school system survey, and CODAP drug admissions indicates the level of substance abuse far exceeds the number seeking treatment.

Juvenile clients constituted 26.6% of drug treatment admissions but only 2.5% of alcohol treatment admissions in 1978. The data concerning juvenile justice system clients identified as having an alcohol abuse problem serious enough to require treatment suggests that on an outpatient basis, referrals are not being made by juvenile workers of their clients to alcohol treatment. The DPI school survey results suggest that perhaps 10% of the upper grade students in Iowa may have a serious drinking problem, in reviewing usage, frequency and age of first use of alcohol. There is presently one facility, located in Sioux City, designed to provide residential care to juvenile alcohol clients. ADASI, Des Moines, is exploring the re-establishment of a public juvenile residence to service that clientele as is Area Substance Abuse Council in Cedar Rapids and

Youth and Shelter Services in Ames. The adult residential programs do not accept individuals under the age of 17. The level of drug service provided to juveniles is significant. Sixty percent of juveniles admitted to drug treatment were voluntary, non-juvenile justice system referrals. Sixty percent of all juveniles admitted to drug treatment were abusing three substances, usually including alcohol. The level of voluntary referral is partially due to the accessibility of drug treatment to juveniles without parental consent. Historically, alcohol treatment services were available only with parental consent. Thus coordination between treatment services are available only with parental consent. The need for coordination between the public and private treatment systems is another key issue regarding provision of residential services to juveniles.

Here are private hospital programs for juvenile substance abusers which do not receive public funding and the therefore will only accept privately insured or paying clients. The clientele identified as needing such treatment are often wards of the state, and are without means to pay for their care. The possibility of utilizing private sources for public clients does exist, and does occur on a limited basis. This area requires additional exploration for future increased access to services. (11)

The Iowa Comprehensive State Plan for Substance Abuse 1979 -1980 reports:

The services provided by substance abuse programs are reaching most of the subpopulation groups with high incidence levels of abuse....The Iowa Department of Substance Abuse (IDSA) program emphasis on polydrug services delivery to youth and young adults is demonstrated through the continuing provision of treatment in drug, alcohol and combined substance abuse programs to a client population utilizing two or more substances at time of admission.

The data reported in the 1977-78 juvenile justice survey indicates approximately 60% of juveniles admitted into one of the three state juvenile institutions has a moderate to severe drug and/or alcohol problem. This compares with the 1973 percent figure of 38.4%. There has been a steadily increasing progression of these numbers resulting in the present percentage of sixty percent. The following table shows the admission to juvenile institutions involving substance abuse diagnosis for the years between 1973-1978.

ADMISSIONS TO JUVENILE INSTITUTIONS INVOLVING SUBSTANCE ABUSE DIAGNOSIS

Fiscal Year	Total Admissions	Drug & Alcohol Admissions	
		Number	% of Total Adm.
1973	707	271	38.4%
1974	706	316	44.7%
1975	1,013	445	43.9%
1976	1,080	535	49.5%
1977	979	519	53.0%
1978	1,143	687	60.1%

The following table shows the breakdown between moderate to severe use for FY 1977 and 1978.

ADMISSIONS TO JUVENILE INSTITUTIONS BY ALCOHOL, DRUG, AND POLYDRUG ABUSE PROBLEM FISCAL YEAR 1977-78

	Moderate to Severe Alcohol Abuse - Little or No Drug Abuse	Moderate to Severe Drug Abuse-Little or No Alcohol Abuse	Moderate to Severe Alcohol Abuse and Drug Abuse	Total
FY 1977	120 (23%)	127 (24%)	272 (53%)	519 (100%)
FY 1978	110 (16%	196 (28.5%)	373 (54%	687 (100%)

"Diagnosis of primary alcohol problems decreased 7% between fiscal year 1977 and 1978, while the number and percent of primary drug diagnosis increased 4.5%. Polydrug abuse diagnosis continues to increase among the juvenile institutional population. In fiscal year 1978, female residents at the state training school for girls were less involved in primary alcohol, drug or polydrug diagnosis (40 or 33.6% of 119) than male residents at the state training school for boys (480 or 65.2% of 736). The rate at the state juvenile home, which is coed, was 54.9% (158 of 288)." (12)

As a result of these indicators of the prevalence of substance abuse among juveniles the Department of Substance Abuse is giving priority to providing specialized training for treatment program staff in treatment needs and outreach techniques to attract youth to treatment through June 30, 1980, and to continue the development of community programs and to assess the feasibility of utilizing alternative residential placement resources in the community for juvenile substance abusers in need of twenty-four hour supervision.

GOAL: INCREASED NUMBER OF INDIVIDUALS WHO ARE ABLE TO SATISFACTORILY COPE WITH SCHOOL AND WORK SITUATIONS, FAMILY CONFLICTS, AND OTHER DAILY PROBLEMS.

Objective: By 1986, an increased number of children and adolescents able to satisfactorily cope with school situations, family conflicts, and other daily problems.

Objective: By 1986, Area Education Agencies, Community Mental Health Centers, and Mental Health Institutes cooperate in developing preventive programs for mental disorders and substance abuse for children and youth.

Objective: By 1986, coordination of public and private treatment services of mental disorders and substance abuse for children and youth.

Objective: By 1986, comprehensive service for children must be available to a population base of 75,000 to 200,000 though not necessarily located within each county.

SRRA: Area Education Agencies cooperate in developing programs to sensitize physicians, schoolnurses, teachers, and other personnel to become more sensitive to mental health problems in school children so early indications of problems are discovered and appropriate referrals are made.

Prevention/health promotion, primary care, acute care inpatient and long term health care systems as they affect the Elderly.

The National Institute of Mental Health has identified the elderly as a high risk population with unique mental health needs. Although approximately 12% of Iowans are over 65, these individuals constitute only about 2% of mental health center clients.

The elderly are a high risk group for the development of emotional problems. During this time of life numerous natural occurances (such as death of people to whom they are close, illness to themselves or people around them, developing disabilities, retirement, etc.) increase the possibility of emotional problems developing. Many times some of the emotional and psychological symptoms are explained away by the aging and others as natural to the aging process when in

reality something could be done to improve or cure the condition causing the symptom.

Illowa Health Systems Plan, 1980-84, points out "mental health problems multiply with aging, although they are often written off as senility. It is estimated up to 25 percent of the elderly have significant mental health problems, but only four percent of the patients seen in public centers and only two percent of those seen in private practice are over 65." (13)

A significant trend in mental health services utilization has been the movement of patients age 65 and over with mental disorders from psychiatric hospitals into nursing homes. The extent of this transition is the proportion of elderly patients with mental disorders in nursing homes compared to psychiatric hospitals changed from a 53 percent/47 percent ratio in 1963 to a 75 percent/25 percent ratio in 1969. Slightly over half of the total expenditures ($14.5 billion) for direct care of the mentally ill was concentrated in two types of facilities, i.e. nursing homes (29 percent) and state, county and other public mental hospitals (23 percent). It would be desirable to stabilize the growth of mental health patients in nursing homes and assure that at least 50 percent of nursing homes have adequate mental health services by 1982.

The quality of mental health care services in the nursing facilities should be monitored and improved on a continuing basis. The Iowa State Department of Health and the Iowa Department of Social Services monitor residential and nursing care facilities. Quality of services could be enhanced if the monitor could be utilized to consult with and educate the facilities staff in methods to increase the quality of the mental health services provided.

Three of the four regional mental health quadrants had as sub-goals in their regional plans "To provide mental health services to the elderly residents in the quadrant." (For detailed planning in this area see State of Iowa Mental Health Services 1979/80 Progress Report)

The areas of need centered around comprehensive physical evaluation for physical needs at mental health institutes to, involving families and local agencies in the evaluation process, implementation of treatment plans, and aftercare planning and "utilizing the services of the hospital internist, the local hospital, and Universtiy Hospitals in Iowa City (in the mental health care of the elderly). Continuing efforts are made to assure the active involvement of families and appropriate agency personnel in treatment/ disposition planning, and aftercare programming and services."

A need was also seen to continue to increase communication with a variety of community agencies such as nursing homes and CCFs; and to acquaint personnel of these facilities with the social and emotional needs of the elderly.

The IMHA progress report for FY 1979/80 states:

The Authority has been seeking innovative means of bringing mental health care to the elderly in the community, for instance, one quadrant of the State had a priority in the area of substance abuse by the elderly to develop a special program to train community counselors to identify and treat the elderly alcoholic in the community.

GOALS: BY 1986, ALL MENTAL HEALTH SERVICE PROVIDERS SEEK MASS MEDIA EXPOSURE, INFORM HUMAN AND HEALTH SERVICES AGENCIES OF THEIR SERVICES, AND COOPERATE IN SERVICES REFERRALS.

Objective: By 1986, an increased number of elders and handicapped able to satisfactorily cope with life experiences and daily problems.

Objective: By 1986, increased acceptability of mental health/substance abuse services by the elderly and handicapped.

Prevention/health promotion, primary care, acute care inpatient and long term health care systems as they affect the Handicapped.

The deaf/hearing impaired handicapped population have a unique problem with access to the mental health system. Their handicap adds to mental distress yet it prohibits verbal communication with a therapist which is essential to treatment. It is estimated approximately 184,000 Iowa citizens have hearing impairments with major areas of concentration being in Cedar Rapids, Des Moines, and Council Bluffs. During FY 1977-78, the number of identified deaf/hearing impaired individuals receiving service from the mental health system was:

- mental health institutes - 6
- community mental health centers - 35
- county care facilities - 55
- state hospital schools - 204 (not identified as mentally disordered)
- vocational rehabilitation - 28
- Iowa School for the Deaf - 30

Iowa, at the present time, offers limited access to mental health services for the deaf/hearing impaired.

- Three of the four mental health institutes have professionals proficient in sign language.
- Several counsellors in vocational rehabilitation (DPI) are skilled in sign language but these people are not listed as mental health professionals. Three of the fifteen area education agencies report at least one mental health professional proficient in sign language.

Using a conservative estimate of an expected 4% of any population having need of treatment for mental disorder at any given time, it is obvious that this high risk population is grossly underserved in Iowa. The Division of mental health resources/DSS has been working closely with Deaf Services of Iowa (DOH) to remedy this situation. There is a definite need for increased training of mental health professionals in the skill of sign language as well as some training dealing with broadening the professionals' perception of what the deaf experience is like. It would seem appropriate at least one staff person where mental health services are delivered be required to be skilled in sign language prior to being hired and this be a part of the job description.

Prevention/health promotion, primary care, acute care inpatient and long term health care systems as they ~~offset~~ affect Low Income Individuals.

A large factor in service availability for those individuals on a fixed (i.e. social security, disability, etc) or low income is the cost of the service needed in both areas of mental health services and substance abuse services. If mental health/ substance abuse services are not available at low or no cost these people can not afford treatment. One way to overcome this barrier is the mechanism of the sliding fee scale. The cost of services is based on the family's gross income so the lower amount of income a family has the less amount the individuals have to pay for requested service. There are several difficulties inherent in

this type of fee system. The cost is one such difficulty since it is based on the family income. If a member of a family needs services but wishes to keep his/her need confiential, s/he is forced to choose between the added emotional stress of telling the family or going without treatment. Another problem with sliding scale fees is they are usually based on gross income rather than net income. This can result in added strain on an already limited income. This is not to say the sliding fee scale is not an equitable system but rather to suggest some improvements. Most agencies will adjust the fee if the consumer identifies unusual existing conditions like extensive debt or other responsibilities limiting their income. This can also lead to complications since this requires the consumer to present a rational argument for a lower fee at a time when lack of rationality may be the presenting problem. In addition the presentation of such an argument can be threatening enough to prohibit its occurrence since s/he must present this argument to someone who represents authority.

GOAL: AVAILABILITY AND ASSESSIBILITY OF MENTAL HEALTH SERVICES TO LOW INCOME INDIVIDUALS.

Objective: Increased access to mental health services by low income individuals through greater flexibility of the sliding fee schedules.

Action Steps: Consult with the Iowa Mental Health and Iowa Substance Abuse Authorities regarding developing more flexibility in the sliding fee scales through greater agency responsiveness to an individual's personal financial situation.

Prevention/health promotion, primary care, acute care inpatient and long term health care systems as they affect Rural Populations.

There are several barriers to quality mental health services in rural Iowa. While services are generally available through community mental health centers and their satellites, it is difficult for a small community to financially support a wide array of services and specialized health personnel. For instance, the CMHCs serving sparsely populated communities most likely do not have counselors trained specifically to work with substance abuse clients, children or the elderly. These centers have difficulty maintaining specially trained professionals in the area because of lack of professional peer groups and general financial considerations. Other community persons and institutions tend to fill the void. The church pastor, family doctor, and public health nurse may well be a major source of counselling. It is important these people be trained to work with mental disorders if they are to serve in these capacities. The area education agencies are a rich source of people trained to work with children. In the areas with rural health initiative grants (see primary care component), provisions must be made for mental health services. However, many people believe that qualifications for mental health counselling are not transferrable to substance abuse counselling. There are chemical dependency units at the four mental health institutes in the State, but these are suitable for only certain persons since clients are entitled to treatment in the least restrictive environment.

1. The listing of programs (see Figures 4.5) indicates some gaps in substance abuse services across the state.

Prevention/health promotion, primary care, abuse care inpatient and long term health care systems as they affect Ethnic and Racial Minorities.

Iowa has two minority populations which may need special health services although this has not been reflected in any of the Health Systems Plans, State Mental Health Plan or Substance Abuse Plan for 1981-86: Asian populations (which include the Vietnamese immigrants) and Muscatine area migrant workers. Accessibility of services may be limited to these populations because of language and cultural barriers. There should be an analysis of the needs of these groups and the needs addressed in planning for mental health services on the local level. Without such planning, consideration for provision of appropriate services may be overlooked which could have a future impact on the health of Iowa's population as a whole.

Goal: Availability and assessibility of mental health services to ethnic and racial minorities in Iowa.

Objective: Needs assessment of Asian and migrant worker mental health needs by 1981.

SRRA: Consult with Iowa area health systems agencies and Mental Health Authority of the need for such an assessment.

Objective: Include special sub-populations (Asian, migrant workers) in the planning analysis for future services.

SRRA: Consult with Iowa area health systems agencies and Mental Health Authority ofthe need to include minority groups in community analyses of needed services.

Continuity of Services

Access to necessary health care services is determined by an individual's ability to gain entry into the health system and to receive appropriate services and continuing care. A range of services which offers care and treatment from the preventive through the acute and rehabilitative phase is essential. Linkages between the community program and the institutional system vary in quality across the state. Most rural counties lack the scope and array of mental health services and ancillary services present in the urban centers.

Distribution of professional and psychiatric staff time per thousand population favors urban areas with the majority of psychiatrists in private practice in cities of 25,000 population or more.

Geography, differing criteria for determining liability under sliding fee scales, natural and architectural barriers for the handicapped, and a lack of an adequate array of services and residential resources deny access to services for some clients. Most of the CMHC contacts with other generic agenices in the community that provide services to mentally ill clients are of a one-time nature.

One of the major sources of continuity of care is the Public Health Nurse. They serve current and former mental health patients living in the community, oversee medications, intervene in some home crisis situations, provide predischarge and post-discharge monitoring and support services for some Mental Health Institute patients.

While there is training of mental health professionals in the state at the Mental Health Institutes and at psychiatric hospitals, there still is very little of this training that entails community-based experiences. The 1978 State Health Plan had as an objective by 1982, there would be identifiable continuity between all community mental health center programs and all primary care physician practices or community health centers, including those established by rural health initiative grants.

GOAL: INCREASED AVAILABILITY OF AND ACCESSIBILITY TO A FULL RANGE OF MENTAL HEALTH/SUBSTANCE ABUSE SERVICES IN A VARIETY OF SETTINGS TO ENSURE APPROPRIATE CARE.

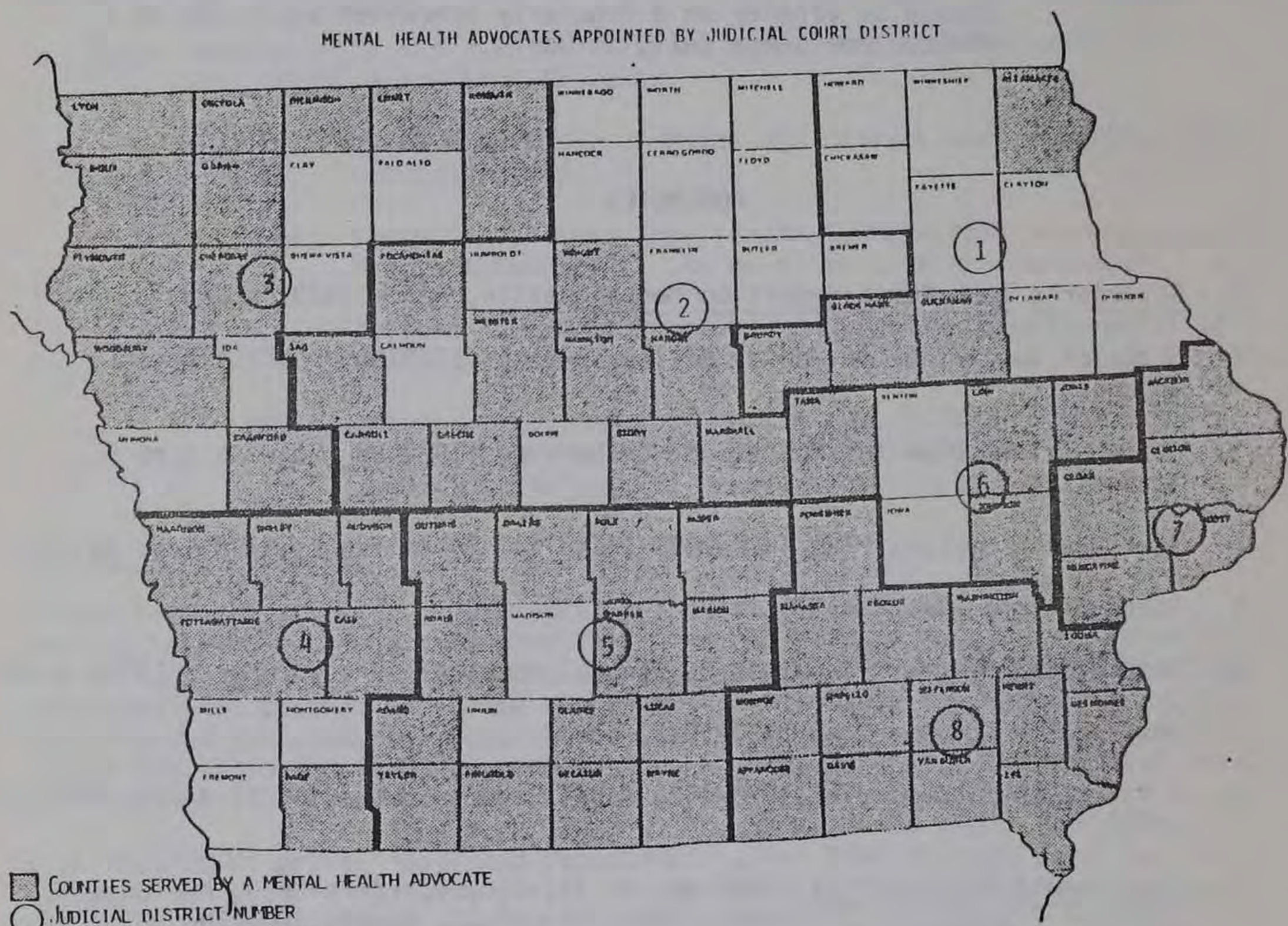
Objective: By 1986, outpatient mental health/substance abuse services should be offered on a regularly scheduled basis and on a 24-hour emergency walls in basis.

FOOTNOTES

1. Governor's Task Force Report on Mental Health, March 1978, p. 13.
2. State of Iowa Plan for Mental Health Services 1979/80 Progress Report, appendix K.
3. State of Iowa Plan for Mental Health Services 1979/80 Progress Report, appendix K.
4. Iowa Health Systems Plan 1980-1985 (Hospital Guide Issues, 1965) p. 39.
5. State of Iowa Plan for Mental Health 1978-1979.
6. Iowa Health Systems Plan 1980-85 (Annual Hospital Survey Report, 1978) p. 39.
7. Iowa Health Systems Plan 1980-1985, p. 34.
8. Iowa Health Systems Plan 1980-1985 (HSRI Report Summary of findings, February 1978).
9. Iowa Health Systems Plan, 1980-85, p. 31, Dickey, Lawrence D, MD, ed., Clinical Ecology, C. C. Thomas, 1976, pp. 26-35, 46-66, 107-120.
10. Comprehensive State Plan for Drug Abuse Prevention, 1978-79, p. 15-17.
11. Ibid., p. 107.
12. Ibid., p. 64.
13. Illowa Health Systems Plan 1980-84, p. 231, (President's Commission on Mental Health, Report, (Washington, D.C., 1978), p. 7).

Figure 1

MENTAL HEALTH ADVOCATES APPOINTED BY JUDICIAL COURT DISTRICT



SOURCE: Mental Health Association of Iowa, Telephone Interviews, November 1979

COUNTIES SERVED BY A MENTAL HEALTH ADVOCATE
JUDICIAL DISTRICT NUMBER
JUDICIAL DISTRICT BOUNDARY

SOURCE: Mental Health Association of Iowa, Telephone Interviews, November 1979
(Iowa Health Systems Agency Plan p. 35)

LOCATIONS OF MENTAL HEALTH INSTITUTES
AND COMMUNITY MENTAL HEALTH CENTERS

Figure 2

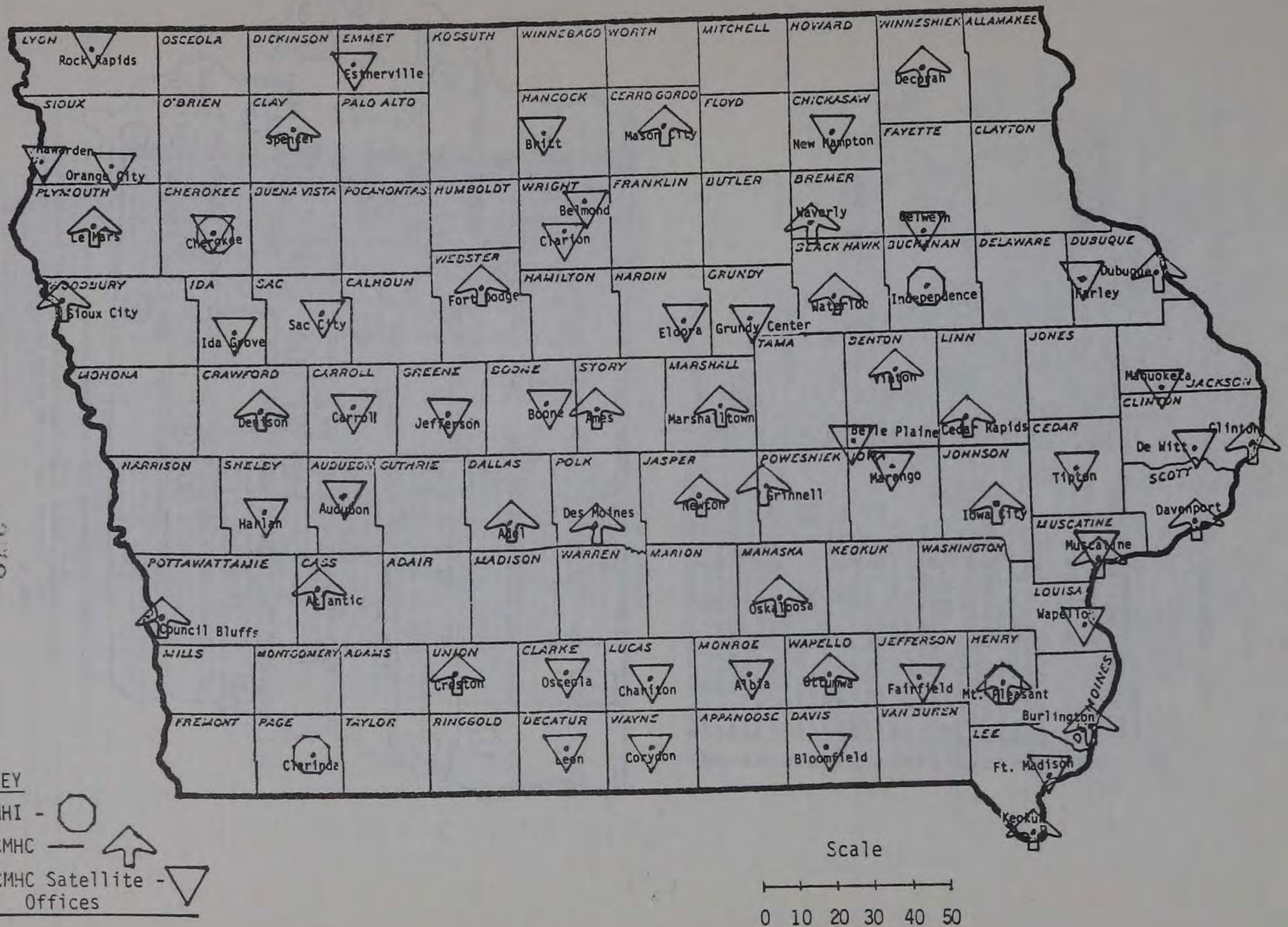
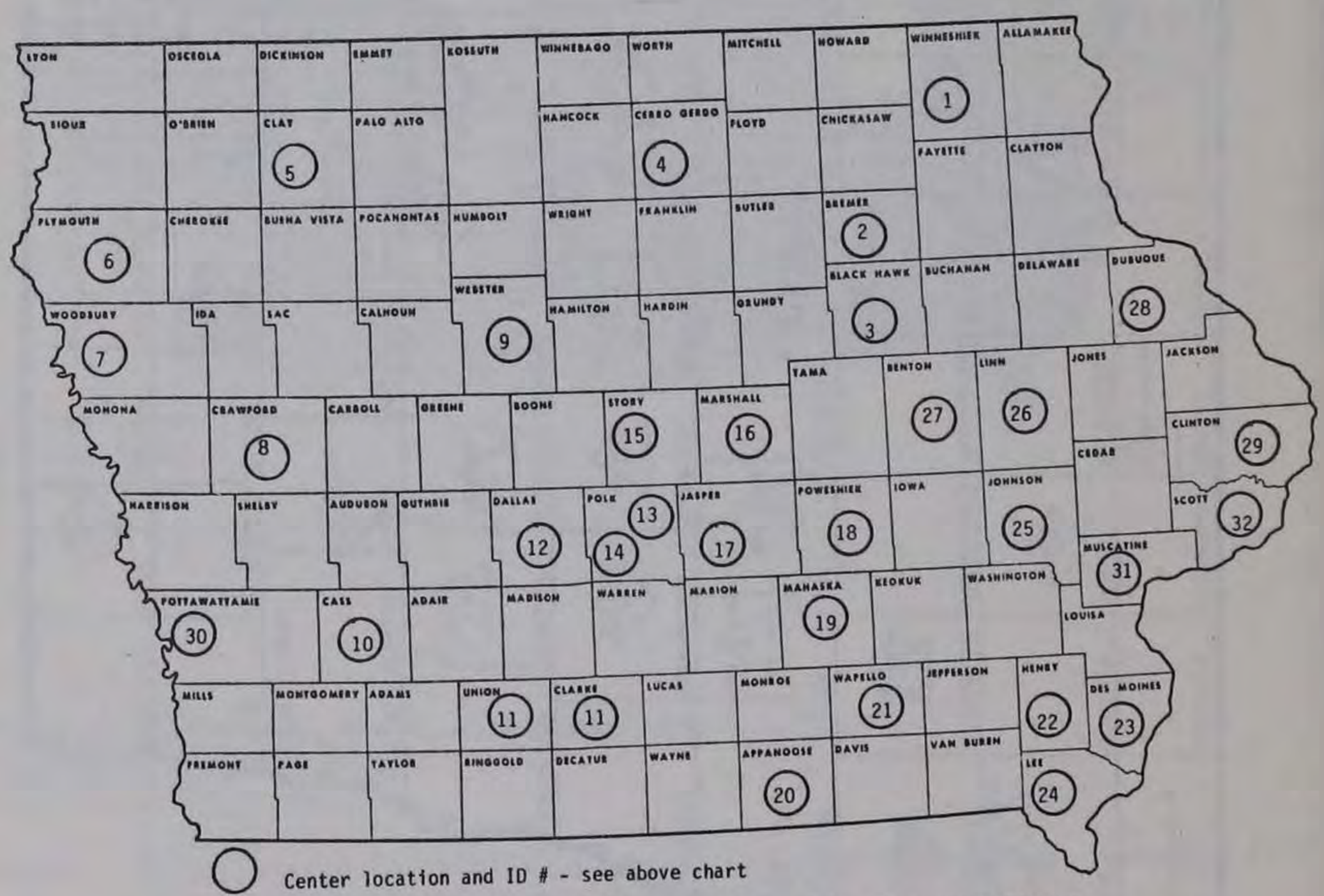


Figure 3

IOWA COMMUNITY MENTAL HEALTH CENTERS, 1978

ID #	Center Name	Counties Served
1	Northeast Iowa Mental Health Center	Allamakee, Howard, Winneshiek, Clayton, Fayette
2	Cedar Valley Mental Health Center	Bremer, Butler, Chickasaw
3	Black Hawk/Grundy Mental Health Center	Black Hawk, Grundy
4	Mental Health Center of North Iowa	Cerro Gordo, Floyd, Franklin, Hancock, Kossuth, Mitchell, Winnebago, Worth, Wright
5	Northwest Iowa Mental Health Center	Buena Vista, Clay, Dickinson, Emmet, Lyon, Palo Alto, O'Brien, Osceola
6	Plains Area Mental Health Center	Cherokee, Plymouth, Sioux
7	Siouxland Mental Health Center	Woodbury
8	West Iowa Mental Services	Carroll, Crawford, Ida, Sac
9	North Central Iowa Mental Health Center	Webster, Calhoun, Hamilton
10	Southwest Iowa Mental Health Center	Audubon, Cass (Shelby)
11	Crossroads Mental Health Service	Union, Clarke
12	West Central Mental Health Center	Adair, Dallas, Guthrie, Madison
13	Des Moines Child Guidance Center	Polk, Warren
14	Polk County Mental Health Center	Polk, Warren
15	Central Iowa Mental Health Center	Boone, Greene, Story
16	Mental Health Center of Mid-Iowa	Marshall, Hardin, Tama
17	Jasper County Mental Health Center	Jasper
18	Poweshiek County Mental Health Center	Poweshiek
19	South Central Mental Health Center	Keokuk, Mahaska, Marion
20	Rathbun Area Mental Health Center	Appanoose, Lucas, Wayne, Decatur, Monroe
21	Southern Iowa Mental Health Center	Wapello, Davis
22	CMHC of Henry, Louisa & Jefferson Co.	Henry, Louisa, Jefferson
23	Southeastern Iowa Mental Health Center	Des Moines
24	Lee County Mental Health Center	Lee
25	Mid-Eastern Iowa CMHC	Johnson, Cedar, Iowa
26	Linn County Psychiatric Clinic	Linn
27	Benton County Mental Health Clinic	Benton
28	Dubuque/Jackson Co. Mental Health Center	Dubuque, Jackson
29	Mental Health Center of Clinton County	Clinton
30	Great River Mental Health Center	Muscatine
31	Community MHC of Scott County	Scott
32	River Bluffs Mental Health Center	Pottawatamie



Center location and ID # - see above chart

Source: Community Mental Health Center Association of Iowa Resource Directory, 1978. State of Iowa Plan for Mental Health Services 1979/80 Progress Report.

Figure 4

SUBSTANCE ABUSE TREATMENT PROGRAMS

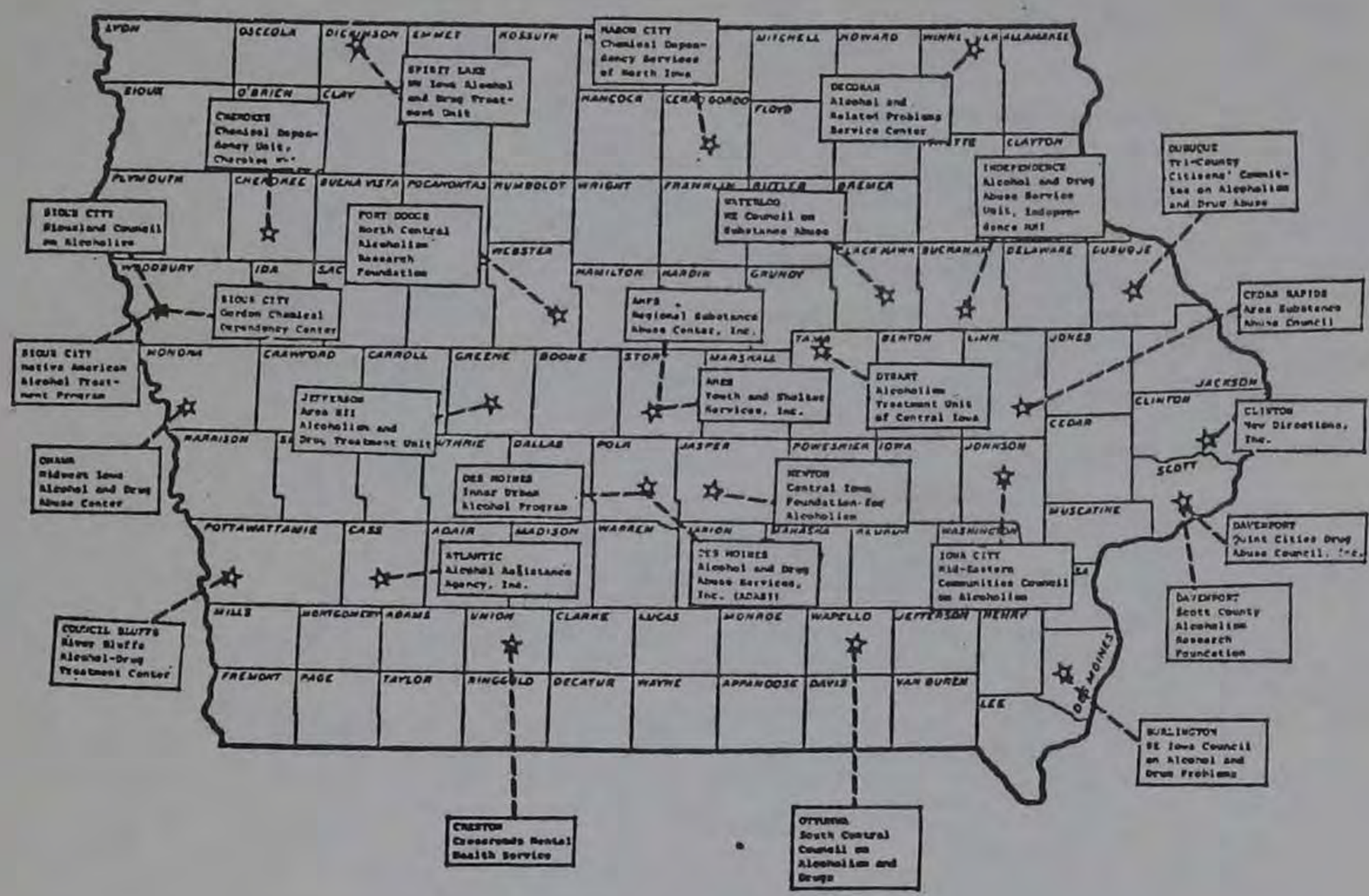


Figure 5

COUNTY LISTING AND TREATMENT PROGRAMS
PROVIDING SERVICES TO EACH COUNTY

Adair - ADASI, Des Moines; AAA, Atlantic
Adams - ADASI, Des Moines; AAA, Atlantic
Allamakee - ARPSC, Decorah
Appanoose - SCCADA, Ottumwa
Audubon - Area XII, Jefferson
Benton -ASAC, Cedar Rapids; Lakeside, Cedar Rapids
Black Hawk - NECSA, Waterloo; CFDHD, Cedar Falls
Boone - RSAC, Ames; YSS, Ames
Bremer - NECSA, Waterloo
Buchanan - NECSA, Waterloo
Buena Vista - NIADTU, Spirit Lake
Butler - NECSA, Waterloo
Calhoun - NCARF, Fort Dodge
Carroll - Area XII, Jefferson
Cass - River Bluffs, Council Bluffs; AAA, Atlantic
Cedar - ASAC, Cedar Rapids; MECCA, Iowa City
Cerro Gordo - CDSNI, Mason City
Cherokee - CDU, Cherokee; SCA, Sioux City
Chickasaw - NECSA, Waterloo
Clarke - AAA, Atlantic; CMHS, Creston
Clay - NIADTU, Spirit Lake
Clayton - ARPSC, Decorah
Clinton - QCDAC, Davenport; New Directions, Clinton
Crawford - MIADAC, Onawa
Dallas - ADASI, Des Moines
Davis - SCCADA, Ottumwa
Decatur - ADASI, Des Moines
Delaware - Tri-County, Dubuque
Des Moines - SICADP, Burlington
Dickinson - NIADTU, Spirit Lake
Dubuque - Tri-County, Dubuque
Emmet - NIADTU, Spirit Lake
Fayette - ARPSC, Decorah
Floyd - CDSNI, Mason City
Franklin - FCAC, Hampton
Fremont - River Bluffs, Council Bluffs
Greene - Area XII, Jefferson
Grundy - NECSA, Waterloo
Guthrie - ADASI, Des Moines; Area XII, Jefferson
Hamilton - NCARF, Fort Dodge
Hancock - CDSNI, Mason City
Hardin - ADASI, Des Moines; ATUCI, Dysart
Harrison - River Bluffs, Council Bluffs
Henry - SICADP, Burlington
Howard - ARPSC, Decorah
Humboldt - NCARF, Fort Dodge
Ida - SCA, Sioux City
Iowa - ASAC, Cedar Rapids; MECCA, Iowa City
Jackson - Tri-County, Dubuque
Jasper - ADASI, Des Moines; CIFA, Newton
Jefferson - SCCADA, Ottumwa
Johnson - ASAC, Cedar Rapids; MECCA, Iowa City
Jones - ASAC, Cedar Rapids
Keokuk - SCCADA, Ottumwa
Kossuth - CDSNI, Mason City
Lee - SICADP, Burlington
Linn - ASAC, Cedar Rapids
Louisa - SICADP, Burlington
Lucas - SCCADA, Ottumwa
Lyon - NIADTU, Spirit Lake
Madison - ADASI, Des Moines
Mahaska - SCCADA, Ottumwa
Marion - ADASI, Des Moines; CIFA, Newton
Marshall - ADASI, Des Moines; ATUCI, Dysart
Mills - River Bluffs, Council Bluffs
Mitchell - CDSNI, Mason City
Monona - MIADAC, Onawa
Monroe - SCCADA, Ottumwa
Montgomery - River Bluffs, Council Bluffs; AAA, Atlantic
Muscatine - QCDAC, Davenport; SCARF, Davenport
O'Brien - NIADTU, Spirit Lake
Osceola - NIADTU, Spirit Lake
Page - River Bluffs, Council Bluffs; AAA, Atlantic
Palo Alto - NIADTU, Spirit Lake
Plymouth - SCA, Sioux City
Pocahontas - NCARF, Fort Dodge
Polk - ADASI, Des Moines; IUAP, Des Moines
Pottawattamie - River Bluffs, Council Bluffs
Poweshiek - ADASI, Des Moines; ATUCI, Dysart
Ringgold - ADASI, Des Moines
Sac - Area XII, Jefferson
Scott - QCDAC, Davenport; SCARF, Davenport
Shelby - River Bluffs, Council Bluffs; MIADAC, Onawa
Sioux - CDU, Cherokee; NIADTU, Spirit Lake
Story - YSS, Ames; RSAC, Ames
Tama - ADASI, Des Moines; ATUCI, Dysart; Mesquakie Program, Tama
Taylor - ADASI, Des Moines; AAA, Atlantic
Union - CMHS, Creston; AAA, Atlantic
Van Buren - SCCADA, Ottumwa
Wapello - SCCADA, Ottumwa
Warren - ADASI, Des Moines
Washington - ASAC, Cedar Rapids; MECCA, Iowa City
Wayne - ADASI, Des Moines; SCCADA, Ottumwa
Webster - NCARF, Fort Dodge
Winnebago - CDSNI, Mason City
Winneshiek - ARPSC, Decorah
Woodbury - Gordon Center, Sioux City; SCA, Sioux City; Native American, Sioux City
Worth - CDSNI, Mason City
Wright - NCARF, Fort Dodge

Note: The chemical dependency units at the four mental health institutes in Cherokee, Clarinda, Independence, and Mount Pleasant serve the northwest, southwest, northeast, and southeast quadrants of the state respectively.

Chapter Eight

Health Care Costs

Health Care Costs

The rise in the cost of health care over the last 20 years is one of foremost issues in health planning and health care provision today. Private and public expenditures for health care have increased much more rapidly than that for other services. Since 1960, the percent of the gross national product going to health care has increased 2/3 from 5.2% of total GNP to 8.8% (1977 estimate). Figure 1 charts this increase from 1929 to 1977, with scattered points for other industrial nations for reference.

There is much debate over the cause of this increase. Realignment of the economy towards services, increased reliance on expensive technology, increased staff to patient ratios, increased insurance coverage, increased salaries, government payments, a greater number of elderly who are high users of care, excessive hospitalization and excess capacity have all been cited as reason for inflation of health care costs. To some degree, all of the above are reasons. Not all of these variables can be analyzed or influenced by public policy, however.

Health planning and public regulation has concentrated on excess institutional capacity, excess utilization and review of the need for new technologies. Hospitals have received most attention because prices have increased more for hospital care than for any other health care service. It is also the largest single health care expense, increasing from 30,8% of all expenditures in 1950 to 40.3% in 1977. (See figure 2)

It has been the increase in government participation in health care finance as much as inflation which has been the stimulus to planning for cost containment, however. Government expenditures for personal health care jumped 484 percent from 7.0 billion to $40.9 billion between 1965 and 1975. Government sources thus accounted for 39.7 percent of personal health care expenditures in 1975, compared to 20.8 percent in 1965. The government's impact is particularly noticeable in the hospital sector, where it met 55.0 percent of expenditures in 1975.

In addition to direct payment for personal health care, the government subsidizes medical research, education, and construction of health facilities as well as providing subsidies through income tax exemptions for health insurance premiums. The total annual level of direct government support to the health industry accounts for nearly half of the total health expenditures.

Figure three charts this change dramatically. It shows a sharp increase in the rate of change after 1974. This public money comes from both state and federal coffers as shown below.

Government support to the Health Industry: Fiscal 1975

Source	Amount ($ billion)	%
Federal Expenditures	$33.8	58.3%
State and Local Expenditures	16.1	27.8
Federal Tax Preferences	8.0	13.8
TOTAL	$57.9	100.0%

Source: The Problems of Rising Health Care Costs, Council on Wage and Price Stability Staff Report, April 1976

Figure four shows that the elderly receive the most public money and have the highest expenses. Thus the elderly are a prime population for health planning, both for their comprehensive health care needs and their impact on public expenditures.

The increase in spending for health care has not been limited to government. Between 1965 and 1975, expenditures under private health insurance plans increased two hundred and twenty-nine (229) percent, from $8.3 billion to $27.3 billion. Despite this large increase in expenditures, the portion of total spending for personal health care under private insurance increased only about two percent. In 1975, spending for health care in the United States was as follows: government - thirty-nine point seven (39.7) percent, private insurance - 26.5 percent, and out-of-pocket 33.8 percent.

The SHPDA and the SHCC believe that the overwhelming evidence of uncontrolled spending for health care must cause us to reevaluate the goal of "health care at any cost." We must move to develop an improved capacity to allocate scarce resources with rational consideration of alternatives. Future expansion of health benefits by government should not be undertaken until the system's current deficiences are corrected.

The question remains as to what the focus of public policy on cost should be in Iowa. Prevention, detection and health education have been stressed throughout the plan as being cost-effective. This is probably the most rewarding investment of public money. Chapter Four makes this argument very convincingly.

What other system changes can be accomplished, though, which will lower costs in Iowa? Perhaps some statistics specific to Iowa should be examined.

A major source of the increase in total medical care expenditures has been in the hospital sector. Hospital expenditures have quadrupled in the last decade and continue to be the largest share of spending for health purposes, totaling $55.4 billion in 1976. In comparison, expenditures for physicians' services (which have nearly tripled in the last, decade) ranked second at $25.4 billion in 1976.

Iowa's 1975 per capita hospital expense was $160.08, over 13 percent below the national average. In 1975, Iowa's adjusted expenses per inpatient day was $99.36, seventh lowest among states and 34.7 percent below the national average of $133.81. Iowa's adjusted expenses per admission in 1975 was $177.43, 13th lowest among states and 33.6 percent below the national average of $1,030.49. The fact that Iowa's hospitals are conservative in their use of physical and human resources contributes to this phenomenon of lower costs.

In 1975, Iowa's net plant assets per bed was $25,715.00, 11th lowest among states and 23 percent below the national average. In 1975, Iowa's full time equivalent personnel per adjusted average daily census was 2.59, third lowest among states and 14 percent below the national average. Iowa's 1975 per capita hospital expense expressed as a percent of per capita income was 16th lowest among states and 15 percent below the national rate. (1)

The geography of Iowa has had a major impact on the development of the State's system of health care services. The land area is 55,941 square miles and the average population density is 50.5 persons per square mile. In 1970, 80 of the state's 99 counties had population densities less than the state average of 50.5. Of these, 30 had population densities less than half the state average.

Because of the distances in rural Iowa, many small health facilities have been developed to provide access to health services within reasonable travel times and distance. The Hill-Burton program contributed to the construction of many small hospitals.

The location of hospitals has an obvious effect upon accessibility to hospital services, and is especially important for rural elderly persons who have limited mobility.

In 1975, only 26.5 percent of the nation's population resided in nonmetropolitan areas, but 49.9 percent of the hospitals were located in nonmetropolitan areas. Also in 1975, 63 percent of Iowa's population resided in nonmetropolitan areas, a rate eleventh highest among states. Approximately 82 percent of Iowa's community hospitals are located in nonmetropolitan areas. (2)

The 1977 Hospital Survey of the Iowa State Department of Health indicates that Iowa has three hospitals with less than 25 beds for a total of 42 beds, 40 hospitals with 25 to 50 beds or a total of 1,535 beds. Total number of beds for the state is 16,048. The average occupany rate for the state is approximately 60 percent with hospitals with 0-25 beds at 61 percent occupancy and those of 25-50 beds at 52 percent occupancy.

The feasibility of changing this situation is limited by the accepted goal of promoting equitable access to health care services. Small hospitals are necessary in many rural areas of the State. The potential does exist to increase utilization of hospital facilities other than traditional acute care.

The population in Iowa, as well as the Nation, is getting older. The portion of the Iowa population age 65 and over increased from 10.4 percent in 1950 to 12.4 percent in 1970. The Iowa population age 75 and over increased by 43.2 percent between 1950 and 1970. The average age at death has been steadily increasing in Iowa for 25 years and is likely to continue increasing.

Currently, the percentage of Iowa's population which is 65 years of age and older is the third highest among states, and 21 percent above the national average. Both in numbers and percentage of total, the population 65 and over is growing in the state: In 1975, 12.6 percent of the state's population was 65 years of age and older; and in 1990, it is projected that 13.8 percent of Iowa's population will be elderly. (3)

The location of the population, and especially the elderly population, in metropolitan and nonmetropolitan areas of the state is a significant indicator of the use of hospital services. In 1975, the percentage of Iowa's population residing in nonmetropolitan areas was 63 percent, 11th highest among states. (4)

Nationally, only 26.7 percent of the population resided in nonmetropolitan areas. Of even greater significance is the fact that 71.6 percent of Iowa's population age sixty-five and over resided in nonmetropolitan areas, whereas less than 32 percent of the nation's elderly resided in nonmetropolitan areas. (5)

According to DHEW figures, the incidence of acute conditions involving restricted activity and/or medical attention for those 65 and over 20 percent higher for those in nonmetropolitan areas than for those in nonmetropolitan areas. (6) Approximately 17.6 percent of the 65 and over population has some limitation of mobility. The rate was twenty (20) percent higher in nonmetropolitan than in metropolitan areas. (7) Two categories of disability days per person per year

(restriced activity days, and bed disability days) are over twice as high for those 65 and over than for the entire population. All categories of disability days for those 65 and over are higher in nonmetropolitan than in metropolitan areas. (8)

The elderly population is particularly susceptible to chronic diseases (heart disease, cancer, and stroke) and is, in general, a medical high risk population. It is evident that the number of elderly people in the population is likely to continue increasing and that the consequent demands for medical care will also increase. The 1976 per capita expenditure for personal health care for persons age 65 and over was $1,521. The difference in per capita health expenditures for those under and over 65 should be explained by the facts that the 65 and over population makes almost twice as many visits to a physician per year than those under 65, and that persons 65 and over have a ratio of inpatient days/1000 population nearly four times that of the rest of the oppulation. (9)

The medical care expenditures for this age group have increased markedly, and will continue to increase, particularly as we increase out technical capacity to sustain life. At the present time, because of reimbursement mechanism, this segment of the population is being treated in the most expensive manner (institutionalization). Less costly and in many instances more acceptable methods of treatment, prevention and detection are possible and should be encouraged.

Given these facts about Iowa, we must also consider some of the system problems. The state agency has identified three system variables that can be influenced through public policy - methods of payment, utilization, and the excess capacity of providers.

Methods of Payment

The health care marketplace differs significantly from other sectors of the economy. In the health care sector, the buyer (consumer) has little influence over what he buys or prices paid. Though the consumer may be consulted, the provider (physician) makes the significant purchasing decisions. To complicate the situation further, the consumer frequently does not directly pay the provider for his goods or services. Instead, a "third party," either private health insurance or government, pays the provider on behalf of the consumer.

In the area of hospital care, there are four participants: the physician, the hospital, the consumer, and the third party, but the physician makes the essential expense generating decisions for all of them. He decides the types and amounts of medical goods and services that will be purchased.

Third parties have become the dominant financing method in the health sector to the extent that they pay for more than two-thirds of all personal health care and more than 90 percent of all hospital care. The Council on Wage and Price Stability reports that "there has been considerable analysis of the impact of widespread insurance coverage upon demand and prices in the health sector; the consensus is that the prevalence of third-party payments is a significant factor affecting decision making by consumers and providers." The widespread use of "first-dollar" coverage where all expenses for hospital care and surgical fees are covered up to a predetermined ceiling is a major factor affecting consumer's decisions. Under such coverage, there is literally no relationship between cost and the consumer's decision to seek care, nor the physician's decision to prescribe care.

In this system, consumers are effectively insulated from the costs of the care they consume. Likewise, the provider is insulated from cost considerations since he commands effectively unlimited resources (the third parties) on behalf of the consumer. It is little wonder then that many consumers and providers have become insensitive to the high costs related to their transactions.

The prevailing method of paying for private health insurance coverage further compounds the consumer's insulation from financial responsibility for personal health care. Nearly 80 percent of health insurance premiums are paid through employment related group plans. Moreover, the employer pays an average of 67 percent of the total premium under such plans and in 41 percent of the policies, the employer pays the total premium.

Another major factor in escalating cost under the third-party system is the method of reimbursing providers. Frequently, these payments are made retrospectively, on the basis of actual costs incurred by the provider. The effect of this type of payment system combined with first-dollar coverage is that the provider has limited incentives to be cost conscious or to practice efficient management.

Finally, the patterns of insurance coverage have been shown to strongly encourage the necessary utilization of the most expensive form of service. Both private insurance and government programs have promoted the use of high cost inpatient services with first-dollar coverage, while lower-cost ambulatory services are either not covered or are subject to high deductibles or shared payments. This extensive coverage for complex and expensive medical services has understandably promoted the availability of complex facilities and services, regardless of the potential for more economical alternatives.

Certainly we can begin to provide better information to both providers and consumers on how they can alter their behavior to contain costs. We can also act to correct the imbalance in the patterns of coverage with a new emphasis on paying for less costly, yet safe, services and less emphasis on high cost inpatient services.

Overutilization of Services

Increases in the quantity of medical care services have traditionally been assumed to increase the quality of care provided. Research is beginning to question this "more is better" thesis and indicate that some part of the increasing utilization of services is unnecessary. Studies of the problem of excess hospital capacity have found that a substantial number of admissions and patient days represent unnecessary or cost-ineffective use. The fact that health maintenance organizations experience hospital utilization rates 30 percent to 50 percent lower than traditional fee-for-service arrangements supports the contention that hospital utilization can be safely reduced.

The recent national concern over malpractice claims may indicate a new factor affecting utilization, so called defensive medicine, i.e., the practice by physicians of ordering unnecessary tests or procedures to offset the potential for malpractice suits. Though there is little data documenting the extent of this phenomenon, there appears to be general acceptance that it is widespread. An effective quality of care and utilization review program should not only identify such unnecessary services, but should offer physicians protection from frivolous malpractice claims by establishing norms and standards for quality care.

Excess Supply of Acute Care Hospital Beds and Services

There is considerable evidence of an excessive supply of hospital beds and services. The Institute of Medicine, in a major study of the problem in 1976, concluded:

> "The evidence clearly indicates that a significant surplus of short-term general hospital beds exist or are developing in many areas of the United States and that these are contributing significantly to rising hospital costs..."

The Institute's conclusion is corroborated in another comprehensive study which observed that the current national ratio of 4.4 beds per thousand population could be safely reduced by at least ten percent.

There is further evidence that even where bed increases are limited, the assets and labor expended per bed (service intensity) continue to increase. This phenomenon is the result of availability of new technology and the tendency of hospitals to compete on the basis of size, technological advances, and "prestige." Again, the third-party financing system provides little check on such added costs.

While the technical potential to constrain or reduce the supply of hospital facilities, beds, and services is far from fully developed, it is adequate to begin. However, there appears to be little popular support for the concept. Recent public opinion over the proposed national health planning guidelines is evidence of public resistance to any proposal which appears to suggest elimination of rural hospitals. There seems to be no argument to the fact that there are too many acute care beds in the state and these empty beds are increasing the cost of hospital care, however there is resistance to decertification of closure of hospitals. The public of the State would be served by a cooperative effort between the hospitals of the State and the health planners to develop a plan for alternative uses for hospital facilities which would increase availability and accessibility of public health services to the citizens of the state and would also serve to restrain the increases in hospital costs through elimination of excess beds.

Considering all of the above, the following goal is established.

GOAL: THE INCREASE OF HEALTH CARE COSTS IN IOWA WILL BE REDUCED.

OBJECTIVE 1: By July, 1980, a recommendation to the Governor and the legislature on whether or not rate regulation is warranted and would prove effective in restraining unnecessary increases in health care costs.

SRRA: By July, 1980, complete studies and analysis relating to hospital and health care facility costs and to the financial status of hospitals and health care facilities to determine if rate regulation would restrain unnecessary increases in health care costs.

The rate regulation study should answer many specific questions and will suggest future objectives. For example, the HSAs in Iowa variously call for a lower total increase in expenditures and a decreased rate of increase, with Midlands tying the rate to the average increase in the consumer price index. The choice between these approaches will have wide repercussions and must be made with as much information as possible. The state's decision will be made after the rate regulation study is completed.

FOOTNOTES

1. Selected Community Hospital Indicators, 1975. America Chicago, Illinois, 1977.

2. Comparative Statistics on Health Facilities and Population - Metropolitan and Nonmetropolitan Areas, AHA, Chicago, Illinois, 1977.

3. Official Iowa Population Projections, 1975-2020. Series I-76, I OPP, July, 1976.

4. Comparative Statistics on Health Facilities and Population - Metropolitan and Nonmetropolitan Areas, AHA, Chicago, 1977.

5. Ibid.

6. NCHS: Current Estimates from Health Interview Survey: 1973-Vital and Health Statistics Series Ten, No. 95.

7. NCHS: Limitation of Activity and Mobility Due to Chronic Condition, US, Vital and Health Statistics Series Ten, No. 96.

8. NCHS: Current Estimates for Health Interview Survey: 1973-Vital and Health Statistics Series Ten, No. 95.

9. Health - U.S., 1975, NCHS, Rockville, Maryland.

Glossary

GLOSSARY OF HEALTH PLANNING TERMS

This glossary of terms is offered as a means of helping the reader better understand the information contained in this Plan. The definitions were extracted largely from "A Discursive Dictionary of Health Care" (February 1976) prepared by the Staff of the Subcommittee on Health and Environment of the Committee on Interstate and Foreign Commerce - U.S. House of Representatives.

GLOSSARY OF HEALTH PLANNING TERMS

ACCEPTABILITY - An individual's (or group's) overall assessment of medical care availability to him or her in terms of such factors as cost, quality, outcome, convenience of care, and provider attitudes. Possible measures of acceptability include:

--Percent of persons dissatisfied with the convenience of health care services
--Percent of persons dissatisfied with the out-of-pocket costs of health care services
--Percent of persons dissatisfied with the overall quality of care received
--Percent of persons dissatisfied with the extent of information provided about their condition and/or treatment

ACCESSIBILITY - A measure of the degree to which the system inhibits or facilitates the ability of an individual or grop to gain entry and receive appropriate services, including geographic, architectural, transportation, social, time and financial considerations. Possible measures of accessibility include:

--Percent of active, primary care physicians with closed practices
--Percent of emergency room use for non-emergeny conditions
--Travel time to care (the time it usually takes an individual to get to his regular source of care)
--Appointment waiting time (the time it usually takes an individual to get an appointment at his regular source of care)
--Percent of the population seeing a physician during a year
--Inpatient days in short-term hospitals per year 1,000 population

AMBULATORY CARE - All types of health services which are provided on an outpatient basis, in contrast to services provided in the home or to persons who are inpatients. While many inpatients may be ambulatory, the term ambulatory care usually implies that the patient has come to a location other than his home to receive services and has departed the same day.

ANNUAL IMPLEMENTATION PLAN (AIP) - A plan, which the National Health Planning and Resources Development Act of 1974 (P.L. 93-641) requires health systems agencies to prepare or update annually, specifying, describing how to implement, and giving priority to, short-run objectives which will achieve the long-range goals of the agency, detailed in its health system plan. Section 1513 of the PHS Act describes the place of AIPs in the larger context of agency functioning.

AVAILABILITY - A measure of the appropriate supply and mix of health services and the capacity of resources for providing care. Health care is available to an individual when he can obtain it at the time and place that he needs it, from appropriate personnel. Availability is a function of the distribution of appropriate resources and services, and the willingness of the provider to serve the particular patient in need. Possible measures of availability include:

--The proportion of service capacity (measured in patient days, visits, procedures, etc.) currently utilized
--The capacity of a service (measured in number of patients whom it can serve annually) per unit of population

See also "accessibility" and "acceptability".

CERTIFICATE OF NEED - A certificate issued by a governmental body to an individual or organization proposing to construct or modify a health facility, or offer a new or different health service, which recognizes that such facility or service when available will be, needed by those for whom it is intended. Where a certificate if required (for instance for all proposals which will involve more than a minimum capital investment or change bed capacity), it is a condition of licensure of the facility or service, and is intended to control expansion of facilities and services, in the public interest by preventing excessive or duplicative development of facilities and services. An example of capital expenditure review, certificate of need for construction of new hospitals is a requirement of law in over half the states and the District of Columbia. Under the National Health Planning and Resources Development Act of 1974, P.L. 93-641, all states are required to have the state health planning and development agency (designated pursuant to the law) administer a state certificate of need program, which must apply to all new institutional health services proposed to be offered or developed in the state. The health systems agencies (local planning bodies under P.L. 93-641) are required to make recommendations to the state agencies regarding proposed new institutional health services within their areas.

CHARACTERISTICS OF THE HEALTH SYSTEM - The major attributes of the health system which health planning agencies must consider in planning for the health system under P.L. 93-641, including: cost, availability, accessibility, continuity, acceptability, and quality. When operational measures are applied to these characteristics, they may serve as indicators of health system performance. They then allow assessment of the resources used to produce health services, the production and delivery of these services, and the imediate impacts of the services on a population's health, environment or behavior. It should be noted that measures of the general health status of a population are not included in this definition because they do not directly measure the performance of the health system. The six characteristics are a major component of the "Health System" taxonomy for planning under P.L. 93-641. See also "Health System".

COMMUNITY HEALTH PROMOTION AND PROTECTION SERVICES - Those services directed at the community level toward improving the personal health behavior of residents and improving the quality of factors in the environment which affect their health. Community Health Promotion and Protection Services include:

--Health Education Services
--Environmental Quality Management
--Food Protection
--Occuptational Health and Safety
--Radiation Safety
--Biomedical and Consumer Product Safety

CONSUMER - One who may receive or is receiving health services. While all people at times consume health services, a consumer as the term is used in health legislation and programs is usually someone who is never a provider, i.e., is not associated in any direct or indirect way with the provision of Health services. The distinction has become important in programs where a consumer majority on the governing body is required as is the case with community health centers and health systems agencies assisted under the PHS Act.

CONTINUITY - A measure of the degree of effective linkages and coordination in producing a succession of services over time regarless of whether care is provided in one setting or multiple settings. Potential measures of continuity include:

--Percent of hospital and nursing home discharges with followup home care among all discharges recommended for home care
--Percent of referrals from prevention and detection services to diagnosis and treatment services actually confirmed
--Percent of patient for whom comprehensive health records are maintained and accessible to all providers from whom they receive service

COST CONTAINMENT - The control of the oveall cost of health care services within the health care delivery system. Costs are contained when the value of the resources committed to an activity are not considered to be excessive. For this reason, the determination of cost containment is frequently subjective and dependent upon the specific geographic area of the activity.

CRITERIA - A measurable characteristic of a health service. Criteria may include the measures used as health system indicatos as well as additional measures related to the performance of specific services across all providers, or the performance or specific services offered by a particular provider. Examples of criteria used in health planning include: Physician/population ratios, travel time to facilities, and accreditation of institutions. See also "standard".

DISABILITY - Any temporary or long term reduction in a person's activity resulting from an acute or chronic condition.

EMERGENCY MEDICAL SERVICE SYSTEM (EMS) - An integrated system of appropriate health manpower, facilities and equipment which provides all necessary emergency care in a defined geographic area. The development of such systems is Federally assisted under the Emergency Medical Services Act of 1973, P.L. 93-154, in which the term is defined and the necessary components of the system listed (Sections 1201 and 1206 of the PHS Act). Prototype systems are found in the State of Illinois and Jacksonville, Florida. One characteristic of such a system would be a central communications facility using the universal emergency telephone number, 911, and having direct communications with all parts of the system with planned dispatching of cases to properly categorized facilities.

FEE-FOR-SERVICE - Method of charging whereby a physician or other practitioner bills for each encounter or service rendered. This is the usual method of billing by the majority of the country's physicians. Under a fee-for-service payment system, expenditures increase not only if the fees themselves increase but also if more units of service are charged for, or more expensive services are substituted for less expensive ones. This system contrasts with salary, per capita or prepayment systems, where the payment is not changed with the number of services actually used or if none are used. While the fee-for-service system is now generally limited to physicians, dentists, podiatrists and optometrists, a number of other practitioners, such as physician assistants, have sought reimbursement on a fee-for-service basis. See also "capitation".

GOAL - In health planning, a quantified statement of a desired future state of the health care system or health status, such as an infant mortality of less than 20 per thousand live births, a physician to population ratio greater than four per thousand, or an increased percentage of the population with an average access time for emergency medical services less than 10 minutes. Health planning formulates goals and seeks to achieve them. A goal differs from an objective by lacking a deadline. systems goals are stated in terms of one of six system characteristics, availability, acceptability, quality, etc.

GOAL LEVEL - The quantitative level with respect to a particular indicator specified in a goal to express the desired level of gaol achievement. Some examples of Goal Levels in relation to goal indicators are:

Indicator	Goal Level
-- Neonatal Mortality	-- Less than 20.0 deaths per 1,000 live births
-- Heart Disease Mortality	-- Less than 280 deaths per 100,000 population aged
-- Percent Population Within 30 Minutes Travel Time To Care	-- At least 90%

GROUP PRACTICE - A formal association of three or more physicians or other health professionals providing services with income from medical practice pooled and redistributed to the members of the group according to some prearranged plan (often, but not necessarily, through partnership). By 1969, 12.8% of all physicians in the U.S. were practicing in groups, mostly in groups on one specialty, and this number is apparently growing rapidly. Multi-specialty groups offer advantages to the patient by their ability to provide several kinds of services on an integrated basis. Groups vary a great deal in size, composition and financial arrangements.

HEALTH - Defined by the World Health Organization as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". Experts recognize, however, that health has many dimensions (anatomical, physiological, and mental) and is largely culturally defined. The relative importance of various disabilities will differ depending upon the cultural milieu and the role of the affected individual in that culture. Most attempts at measurements have taken a negative approach in that the degree of ill health has been assessed in terms of morbidity and mortality. In general, the detection of changes in health status is easier than the definition and measurement of the absolute level of health.

HEALTH MAINTENANCE ORGANIZATION (HMO) - An entity with four essential attributes:

(1) an organized system for providing health care in a geographic area, which entity accepts the responsibility to provide or otherwise assure the delivery of;

(2) an agreed upon set of basic and supplemental health maintenance and treatment of services to;

(3) a voluntarily enrolled group of persons; and

(4) for which services the HMO is reimbursed through a pre-determined, fixed, periodic prepayment made by or on behalf of each person or family unit enrolled in the HMO without regard to the amounts of actual services provided. (From the report of the Committee on Interstate and Foreign Commerce on the HMO Act of 1973, P.L. 93-222, in which the term is legally defined, Section 1301 of the PHS Act). The HMO is responsible for providing most health and medical care services required by enrolled individuals or families. These services are specified in the contract between the HMO and the enrollees. The HMO must employ or contract with health care providers who undertake a continuing responsibliity to provide services to its enrollees. The prototype HMO is the Kaiser-Permanete system, a prepaid group practice located on the West Coast. However, medical foundations sponsored by groups of physicians are included under the definition. HMOs are of public policy interest because the prototypes appear to have demonstrated the potential for providing high quality medical services for less money than the rest of the medical system. Specifically, rates of hospitalization and surgery are considerably less in HMOs than occurs in the system outside such prepaid groups, although some feel that earlier care, skimping or skimming may be better explanations.

HEALTH MANPOWER - Collectively, all men and women working in the provision of health institutions and programs; whether or not professionally trained; and whether or not subject to public regulation. Facilities and manpower are the principal health resources used in producing health services. In 1973 there were over four million people working in over 200 health occupations.

HEALTH STATUS - The state of health of a specified individual, group or population such as Ohioans, an HMO membership, or an employer's employees). It is as difficult to describe or measure as the health of an individual and may be measured with people's subjective assessment of heir health, or with one or more indicators of mortality and morbidity in the popoulation, such as longevity, maternal and infant mortality, and the incidence or prevalence of major diseases (communicable, coronary, malignant, nutritional, etc.). These are, of course, measures of disease status, but have to be used as proxies in the absence of measures of either objective or subjective health. Health status conceptually is the properoutcome measure for the effectiveness of the specific population's medical care system, although attempts to relate variations in health status and the effects of available medical care have proved difficult and generally unsuccessful. It cannot be measured with measures of available health resourcs or services (such as physician to population ratios) which, in this context, would be process measures.

HEALTH STATUS INDICATOR - A quantitative measure used to reflect the health status of the community. Health Status Indicators may be general measures of quality of health such as indicators of longevity and functional ability, or measures of disease or disorder which comprise or account for dysfunction or mortality. Illustrative Health Status Indicators include the following:

--Neonatal mortality rate
--Heart disease mortality among the population aged 45-64
--The annual number of persons per 1,000 population incurring major restrictions in activity due to accidents

HEALTH SYSTEM - All the services, functions, resources, programs and financing mechanisms in a geographic area whose purpose (or result) is to affect the state of health of the population. P.L. 93-641 requires planning organizations to do so requires a common method of organizing, viewing or classifying the system--ataxonomy of the health system. Although many variations are possible, the Department of Health, Education and Welfare has developed such a common taxonomy of the health system for use in planning under P.L. 93-641. The taxonomy has three major components: "health system services", "health system settings" and "characteristics of the health systems". These major components have the following sub-components:

Health System Services

1. Community Health Protection and Promotion (Prevention)
2. Prevention and Dectection Services (Prevention and Primary Care)
3. Diagnosis and Treatment Services (Primary Care and Acute Care)
4. Habilitation and Rehabilitation Services (Long Term Care)
5. Maintenance Services (Long Term Care)
6. Support Services (Prevention, Primary Care, Acute Care, Long Term Care)

Characteristics of the Health System

1. Cost
2. Availability
3. Accessibility
4. Continuity
5. Acceptability
6. Quality

Health System Settings

1. Community Setting
2. Home Setting
3. Mobile Setting
4. Ambulatory Setting
5. Short-stay Setting
6. Long-stay Setting
7. Free-standing Setting

HEALTH SYSTEM INDICATOR - A measure used to represent how well the health system is performing. Health System Indicators usually measure broad, general characteristics of the health system such as the availability, accessibility, acceptability, quality, continuity, and cost-effectiveness of health services. Issustrative Health Systems Indicators include the following:

--Percent of the population within 30 minutes travel time of their regular source of care
--Hospital inpatient costs per capita
--Percent of pregnant women with adequate prenatal care

HEALTH SYSTEMS AGENCY (HSA) - A health planning and resources development agency designated under the terms of the Natinal Health Planning and Resources Development Act of 1974, P.L. 93-641. P.L. 93-641 requires the designation of an HSA in each of the health service areas in the United States. HSAs are to be non-profit private corporations, public regional planning bodies, or single units of local government, and are charged with performing the health planning and resources development functions listed in Section 1512 of the Act. HSA functions include preparation of a health system plan (HSP) and an annual implementation plan (AIP), the issuance of grants and contracts, the review and approval or disapproval of proposed used of a wide range of Federal funds in the agency's health service area, and review of proposed new and existing instutional health services and making of recommendations respecting them to state health planning and development agencies. HSAs replace previously existing areawide CHP agencies, but with expanded duties and powers.

HIIL-BURTON - Legislation, and the programs operated under that legislation, for Federal support of construction and modernization of hospitals and other health facilities, beginning with P.L. 79-725, the Hospital Survey and Construction Act of 1946. The original law, which has been amended frequently, provided for surveying state needs, developing plans for construction of hospitals and public health centers, and assisting in construction and equipping them. Until the late 1960s, most of the amendments expanded the program in dollar amounts and scope. More recently, the administration has attempted to terminate the program while the Congress has sought to restructure it toward support of outpatient facilities,

facilities to serve areas deficient in health services, and training facilities for health and allied health professions. Under P.L. 93-641, the National Health Planning and Resources Development Act of 1974, the Hill-Burton program will be administered by the state health planning and development agency. The puprpose of the existing Hill-Burton programs was modified by P.L. 93-641 to allow assistance in the form of grants, loans or loan guarantees for the following purposes only: modernization of health facilities; construction of outpatient health facilities; construction of inpatient facilities in areas which have experienced recent rapid population growth; and conversion of existing medical facilities for the provision of new health services.

HOME HEALTH CARE - Health services rendered to an individual as needed in the home. Such services are provided to aged, disabled, sick or convalescent individuals who do not need institutional care. The services may be provided by a visiting nurse association (VNA), home health agency, hospital or other organized community group. They may be quite specialized or comprehensive (nursing services, speech, physical, occupational and rehabilitation therapy, homemaker services, and social services). Under Medicare, such services must be provided by a home health agency. Under Medicaid, states may, but do not have to, restrict coverage of home health care to services provided by home health agencies.

INCIDENCE - In epidemiology, the number of cases of disease, infection, or some other event having their onset during a prescribed period of time in relation to the unit of population in which they occur. It measures morbidity or other events as they happen over a period of time: the number of accidents occurring in a manufacturing plant during a year in relation to the number of employees in the plant; or the number of cases of mumps occurring in a school during a month in relation to the pupils enrolled in the school. Usually refers only to the number of new cases, particularly of chronic diseases. The incidence of common colds high relative to their prevalance. In health economics, the distribution of a tax among groups, usually income groups, in the population. Nominal incidence is the distribution mandated by law, such as a specified division of a payroll tax between employers and employees. Ultimate incidence is the distribution after the income effects of the tax are allowed for. For example, most economists feel that the employer's share of a payroll tax is ultimately borne by the employees in lower wages or consumers in higher price.

INTERMEDIATE CARE FACILITY (ICF) - An institution recognized under the Medicaid program which is licensed under state law to provide, on a regular basis, health-related care and services to individuals who do not require the degree of care or treatment which a hospital or skilled nursing facility is designed to provide, but who, because of their mental or physical condition, require care and services (above the level of room and board) which can be made available to them only through institutional facilities. Public institutions for care of the mentally retarded or people with related conditions are also included. The distinction between "health-related care and services" and "room and board" has often proven difficult to make but is important because ICFs are subject to quite different regulation and coverage than institutions which do not provide health-related care and services. An ICF/MR is an ICF which cares solely or particularly for the mentally retarded.

MEDICAID TITLE (XIX) - A federally-aided, state operated and administered program which provides medical benefits for certain low-income persons in need of health and medical care. The program, authorized by Title XIX of the Social Security Act, is basically for the poor. It does not cover all of the poor, however, but only persons who are members of one of the categories of people who can be covered under the welfare case payment programs--the aged, the blind, the disabled, and members of families with dependent children where one parent is absent, incapacitated or unemployed. Under certain circumstances states may provide Medicaid coverage for children under 21 who are not categorically related. Subject to broad federal guidelines, states determine the benefits covered, program eligibility, rates or payment for providers, and methods of adminstering the program. Medicaid is estimated to provide services to some 25 million people, with federal-state expenditures of approximately $12.5 billion in fiscal year 1975.

MEDICAID (TITLE XVIII) - A nationwide health insurance program for people aged 65 and over, for persons eligible for social security disability payments for over two years, and for certain workers and their dependents who need kidney transplantation or dialysis. Health insurance protection is available to insured persons without regard to income. Monies from payroll taxes and premiums from beneficiaries are deposited in special trust funds for use in meeting the expenses incurred by the insured. The program was enacted July 30, 1965, as Title XVIII--Health Insurance for the Aged--of the Social Security Act, and became effective on July 1, 1966. It consists of two separate but coordinated programs: Hospital Insurance (Part A); and; supplementary medical insurance (Part B).

MORBIDITY - The extent of illness, injury, or disability in a defined population. It is usually expressed in general or specific rates of incidence or prevalence. Sometimes used to refer to any episode of disease. See also "mortality".

MORTALITY - Death. Used to describe the relation of deaths to the population in which they occur. The mortality rate (death rate) expresses the number of deaths in unit of population within a prescribed time and may be expressed as crude death rates (e.g., total deaths in relation to total population during a year) or as rates specific for diseases and, sometimes, for age, sex, or other attributes (e.g., number of deaths from cancer in white males in relation to the while male population during a year).

NURSE PRACTITIONER - A registered nurse qualified and specially trained to provide primary care, including primary health care homes and in ambulatory care facilities, long-term care facilities and other health care institutions. Nurse practitioners generally function under supervision of a physician but not necessarily in his presence. They are usually salaried rather than reimbursed on a fee-for-service basis, although the supervising physician may receive fee-for-service reimbursement for their services.

OBJECTIVE - In health planning, a quanitifed statement of a desired future state or condition with a stated deadline (usually five years in this plan) for achieving the objective, such as an average access time for emergency medical services of less than 30 minutes by 1976, or development of an operational PSRO by 1977. Health planning specifies objectives which will, when implemented, achieve its goals. See also "policy" and "budget".

OCCUPANCY RATE - A measure of inpatient health facility use, determined by dividing available bed days by patient days. It measures the average percentage of a hospital's beds occupied and may be institutionwide, or specific for one department or service.

PATIENT ORIGIN STUDY - A study, usually undertaken by an individual health program or health planning agency, to determine the geographic distribution of the home of the patients served by one or more health programs. Such studies help define catchment and medical trade areas, and are useful in locating and planning the development of new services.

PEER REVIEW - Generally, the evaluation by practicing physicians or other professionals of the effectiveness and efficiency of services ordered or performed by other practicing physicians or other members of the profession whose work is being reviewed (peers). Frequently refers to the activities of the Professional Standards Review Organizations (PSRO) which, in 1972, were required by P.L. 92-603 to review services provided under the Medicare, Medicaid, and Maternal and Child Health programs. Local PSROs, which receive federal guidance and funding from HEW, are staffed by local physicians, osteopaths and non-physicians. Their duties include the establishment of criteria, norms and standards for diagnosis and treatment of disease encountered in the local PSRO jurisdiction, and review of services that are inconsistent with the established norms, e.g., hospital stays longer than the normal length of stay. The norms may be iput, process or outcome measures. Peer review has been advocated as the only possible form of quality control for medical services because it is said that only a physician's professional peers can judge his work. It has been criticized as having inherent conflict of interest, since, it is said, a physician will not properly judge those who will judge him, and also as not adequately reflecting patient objectives and points of view.

PLAN DEVELOPMENT PROCESS - A cyclical process of expressing community values and long range aspirations for health status and health system performance, projecting and evaluating the capabilities of current health systems services to address them, and designing and choosing among actions which will close the gaps between projected and desired levels of community health system performance.

PLAN IMPLEMENTATION - The process by which an agency promotes the accomplishment of the recommendations in its plan. Plan implementation utilizes a combination of methods including advocacy, financial and/or technical assistance to providers, and regulatory controls.

POLICY - A course of action adopted and pursued by a government, party, statesman, or other individual or organization; any course of action adopted as proper, advantageous or expedient. The Congress makes policy principally by writing legislation and conducting oversight activities. The term is sometimes used less actively to describe any stated position on matters at issue, i.e., an organization's policy statement on national health insurance between an isurer and the insured. In the executive branch of the federal government, policies are documents which interpret or enlarge upon rules, and are sometimes referred to as guidelines. Policies bear the same relationship to rules (regulations) as rules do to law, except that unlike regulations, they do not have the force of law.

PREVALENCE - An estimated number of conditions which exist at one point in time or during a specific period of time such as a week, a month, or a year.

PREVENTIVE SERVICES - A term used in this plan which causes health promotion and protection services as well as some diagnostic services and some primary treatment. Prevention services can be classified into three categories:

Primary - Activities undertaken to prevent the occurrence of disease or illness.

Secondary - To intervene after disease can be detected but is a sympthomatic

Tertiary - To prevent the progress of symptomatic disease

Prevention services may:

1) Promote community health through programs to reduce smoking, to control stress, to improve nutrition, to encourage exercise, to discourage drug abuse;

2) Protect community health through accident control, toxic agent surveillance and control, community fluoridation; and,

3) Prevent disease through health services such as family planning, prenatal, infant care, immunizations, hypertension

One and two above are mainly primary prevention, while three is mainly secondary or tertiary prevention.

PREVENTIVE MEDICINE - Care which has the aim of preventing disease or its consequences. It includes health care programs aimed at warding off illnesses (e.g., immunizations), early detection of disease (e.g., Pap smears), and inhibiting further deterioration of the body (e.g., exercise or prophylactic surgery). Preventive medicine developed subsequent to bacteriology, and was concerned in its early history with specific medical control measures taken against the agents of infectious diseases. With increasing knowledge of nutritional, malignant and other chronic diseases, the scope of preventive medicine has been extended. It is now operatively assumed that most, if not all, problems are preventable at some stage of their development. Preventive medicine is also concerned with general preventive measures aimed at improving the healthfulness of our environment and our relations with it through such things as avoidance of hazardous substances, modified diet, and family planning. In particular, the promotion of heath through altering behavior, especially by health education, is gaining prominence as a component of preventive care. See also "public health" and "consultation and education services".

PRIMARY CARE - Basic or general health care which emphasizes the point when the patient first seeks assistance from the medical care system and the care of the simpler and more common illnesses. The primary care provider usually also assumes ongoing responsibility for the patient in both health maintenance and therapy of illness. It is comprehensive in the sense that it takes responsibility for the overall coordination of the care of the patient's health problems, be they bioloical, behavioral or social. The appropriate use of consultants and community resources is an important part of effective primary care. Such care is generally provided by physicians, but is increasingly provided by other personnel such as family nurse practitioners.

PROFESSIONAL STANDARDS REVIEW ORAGNIZATION (PSRO) - A physician-sponsored organization charged with comprehensive and ongoing review of services provided under the Medicare, Medicaid and Maternal and Child Health programs. The purpose of this review is to determine for purposes of reimbursement under these programs whether services are: medically necessary; provided in accordance with professional criteria, norms nd standards; and, in the case of institutional services, rendered in an appropriate setting. The requirement for the establishment of PSROs was added by the Social Security Amendments of 1972, P.L. 92-603, to the Social Security Act as Part B of Title XI. PSRO areas have been designated throughout the country and organizations in many of these areas are at various stages of implementing the required review functions. See also "peer review".

PROVIDER - An individual or organization whose responsibilities involved the provision, administration, teaching or development of health services, activities or supplies. The provider may have a direct or indirect interest in the health industry.

PUBLIC HEALTH - The science dealing with the protection and improvement of community health by organized community effort. Public health activities are generally those which are less amanable to being undertaken or less effective when undertaken on an individual basis, and do not typically include direct personal health services. Immunizations, sanitation, preventive medicine, quarantine and other disease control activities, occupational health and safety programs,, assurance of the healthfulness of air, water and food, health education, and epidemiology are recognized public health activities.

SECTION 1122 - A section of the Social Security Act added by P.L. 92-603. The Section provides that payments will not be made under Medicare of Medicaid with respect to certain disapproved capital expenditures determined to be inconsistent with state or local health plans. P.L. 93-651, the National Health Planning and Resources Development Act of 1074, requires states participating in the Section 1122 program to have the new state health planning and development agency serve as the Section 1122 agency for purposes of the required review. Capital Expenditure Review is an expenditure, which under generally accepted accounting principles is not properly chareable as an expense of operation or maintenance, for the acquistion, replacement, modernization or expansion of facilities or equipment. See also "certificate-of-need".

SHARED SERVICES - The coordinated, or otherwise explicitly agreed upon, sharing of responsibility for provision of medical or non-medical services on the part of two or more otherwise independent hospitals or other health programs. The sharing of medical services might include, for example an agreement that one hospital provide all pediatric care needed in a community and no obstetrical services while another undertook the reverse. Examples of shared non-medical services would include joint laundry or dietary services for two or more nursing homes. Common laundry services purchases by two or more health programs from one independent retailer of laundry services are not usually thought of as shared services unless the health programs own or otherwise control the retailer.

SKILLED NURSING FACILITY (SNF) - A nursing facility participating in the Medicaid and Medicare programs that meets specified requirements for services, staffing and safety.

STANDARD - A quantitative and/or qualitative value assigned to a particular criterion. Generally, the measure is set by competent authority as the rule for measuring quantity or quality. Examples of standards assigned to criteria are: a minimum ratio of 1:1000 (quantitative) for a physician/population ratio in an area, a maximum of 30 minutes (quantative) travel time to a facility, and meeting JCAH stanards (qualitative) for accreditation of a facility. See also "criteria".

STATE HEALTH PLAN - Under P.L. 93-641, a state-level plan finalized and adopted by the SHCC, based upon the HSPs of all HSAs in the state and upon a preliminary SHP (PSHP) prepared by the SHPDA. The SHP has its purpose the articulation of goals and priorities to guide: development of a coordinated approach in the HSPs relative to areas of statewide concern; development and implementation of health policies for both public and private sectors in the state; and implementation of priority statewide programs identified during plan development.

STATE HEALTH PLANNING AND DEVELOPMENT AGENCY (SHPDA) - Section 1521 of the PHS Act, added by P.L. 93-641, requires the establishment of a state health planning and development agency in each state. As a replacement for existing state CHP agencies, SHPDAs will prepare an annual preliminary state health plan and the state medical facilities plan (Hill-Burton). The agency will also serve as the designated review agency for purposes of Section 1122 of the Social Security Act and administer a certificate-of-need program.

STATE MEDICAL FACILITIES PLAN (SMFP) - Under P.L. 93-641 (Title XVI), a state-level plan developed by the SHPDA and approved by the SHCC which: sets forth the requirements of the state for inpatient and outpatient facilities and for modernization of existing facilities; established statewide priorities among needed projects for Title XVI funding or other funding; provides the minimum requirements for maintenance and operation of facilities which receive Title XVI assistance. The SHFP must be consistent with the SHP and will most likely be a sub-part of the SHP.

STATEWIDE HEALTH COORDINATING COUNCIL (SHCC) - A state council of providers and consumers (who shall be in the majority) required by Section 1524 of the PHS Act, added by P.L. 93-641. Each SHCC generally will supervise the work of the state health planning and development agency, and review and coordinate the plans and budgets of the state's health systems agencies (HSAs). It will also annually prepare a state health planning from HSA plans and the preliminary plans of the state agency. The SHCC will also review applications for HSA planning and resource development assistance.

TERTIARY CARE - Services provided by highly specialized providers (e.g., neurologists, neurosurgeons, thoracic surgeons, intensive care units). Such services frequently require highly sophisticated technological and support facilities. The development of these services has largely been a function of diagnostic and therapeutic advances attained through basic and clinical biomedical research. See also "primary care".

THIRD-PARTY PAYER - Any organization, public or private, that pays or insures health or medical expenses on behalf of beneficiaries or recipients (e.g., Blue Cross and Shield, commerical insurance companies, Medicare and Medicaid. The individual generally pays a premium for such coverage in all private and some public programs. The organization then pays bills on his behalf;

such payments are called third party payments and are distinguished by the separation between the individual receiving the service (the first party), the individual or institution providing it (the second party) and the organization paying for it (the third party).

TITLE XIX - The title of the Social Security Act which contains the principal legislative authority for the Medicaid program, and therefore a common name for the program.

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