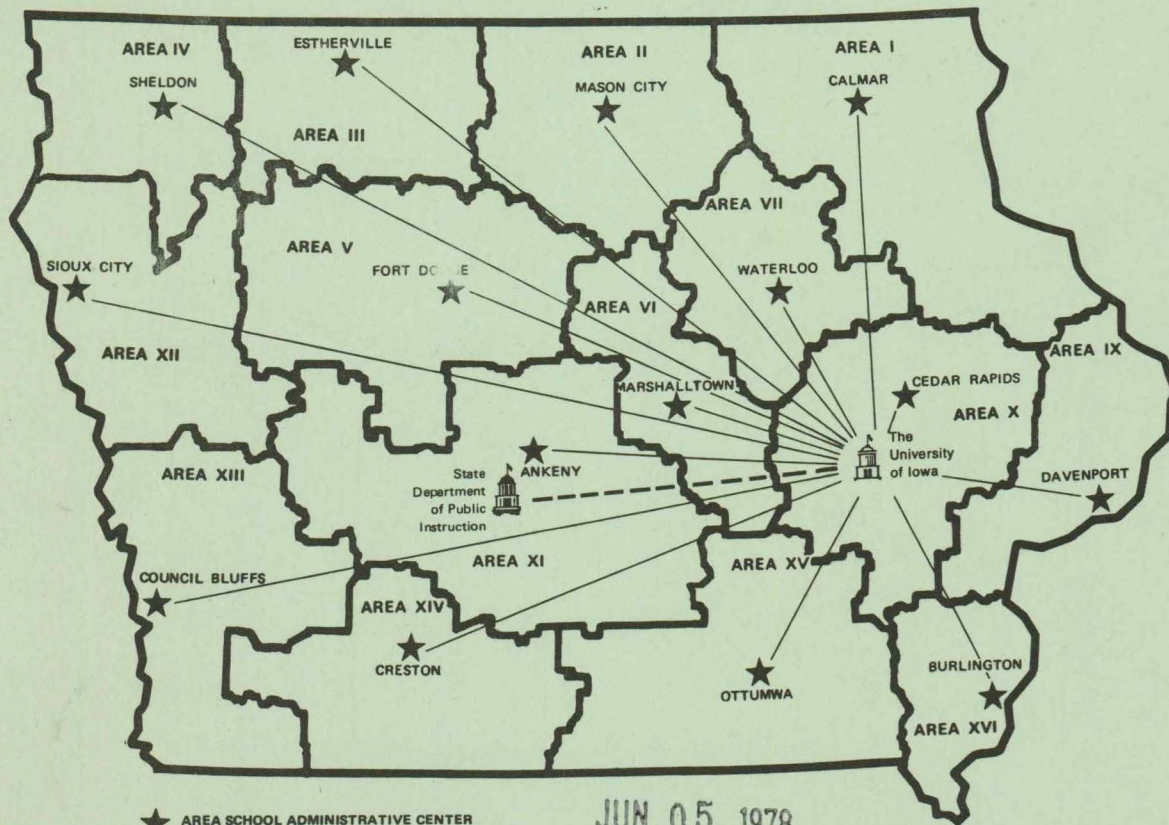


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AN OVERVIEW OF
HEALTH OCCUPATIONS EDUCATION
IN THE PUBLIC EDUCATION SYSTEM
OF IOWA



JUN 05 1978

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FOR FURTHER INFORMATION ON ANY AREA COVERED
IN THIS REPORT, PLEASE FEEL FREE TO CONTACT:

Program in Health Occupations Education
The University of Iowa
135 Melrose Avenue
Iowa City, Iowa 52242

FOR DETAILED INFORMATION ON INDIVIDUAL LOCAL
PROGRAMS, PLEASE CONTACT THE APPROPRIATE
INSTITUTION(S). ADDRESSES CAN BE FOUND IN
APPENDIX I.

FOR PUBLICATIONS AVAILABLE FROM THE PROGRAM IN
HEALTH OCCUPATIONS EDUCATION, PLEASE REFER TO
APPENDIX II.

AN OVERVIEW OF HEALTH OCCUPATIONS EDUCATION
IN THE PUBLIC EDUCATION SYSTEM OF IOWA - 1977

Program in Health Occupations Education
The University of Iowa
MARA Building
135 Melrose Avenue
Iowa City, Iowa 52242

in cooperation with

Area Schools and Career Education Branch
Iowa Department of Public Instruction
Des Moines, Iowa

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Updated Annually in December

INTRODUCTION

Adequate health care at reasonable cost now is deemed a right of every individual in this nation. Implicitly, the delivery of these services requires a comprehensive health care system which includes all aspects of care --- preventive, therapeutic, convalescent, and custodial.

Further, it is recognized that:

- *in the many settings where health care takes place, these services must be provided by well-prepared, competent personnel;
- *the level of complexity of care needed among utilizers of these services will vary according to their health care needs;
- *personnel prepared at a level of education commensurate with each level of complexity can provide these services effectively; (i.e., those prepared at the aide, assistant, technical, professional or autonomous professional level);
- *existing types of educational programs are preparing graduates who indeed function competently at these various levels within the continuum of complexity; and that
- *this is a realistically sound and fiscally responsible approach to the preparation and utilization of health care personnel.

Health occupations education programs in Iowa's public education system make a major contribution to the preparation of personnel to provide these services which have come to be expected by the citizens of Iowa as well as nationwide.

DEFINITION OF HEALTH OCCUPATIONS EDUCATION

Health occupations education is an integral part of the total field of education. It prepares health workers for employment in positions supportive to health professionals but not requiring a baccalaureate degree, provides continuing education opportunities for health care personnel, and offers classes in health maintenance for community education. Increasingly; elementary and secondary schools are offering health occupations education in the form of exploratory activities and the preparation for carefully selected health care aide roles deemed appropriate for this educational level.

THE STATE LEVEL ORGANIZATIONAL STRUCTURE
FOR HEALTH OCCUPATIONS EDUCATION
UNDER VOCATIONAL-TECHNICAL EDUCATION

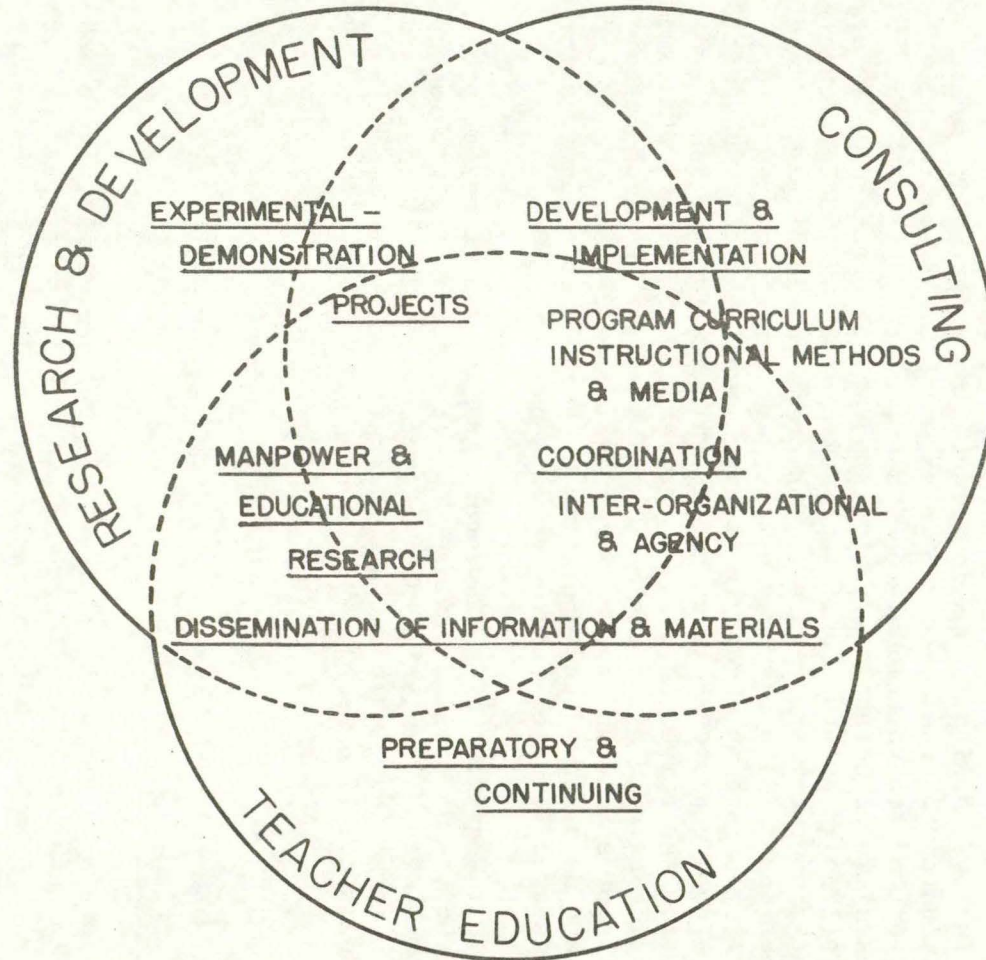
Through contractual agreement, the professional staff of the Program in Health Occupations Education, The University of Iowa, also serve as Health Occupations Education consultants and teacher educators in the Area School Branch, Iowa Department of Public Instruction. The Program in Health Occupations Education is an integral department of the University, under the office of its Vice President for Academic Affairs. This cooperative arrangement, requested by the Iowa Department of Public Instruction and with the interest of The University of Iowa, has continued since 1958 through contracts reviewed and renewed annually. The Program in Health Occupations Education was established in 1965, an outgrowth of consultative services provided by University personnel under the terms of this agreement since the implementation of its experimental-demonstration program in practical nurse education in 1952. This Program was designated as the organized unit through which the University and the Iowa Department of Public Instruction would cooperate to maintain and expand statewide leadership in health occupations education in four major areas: (1) consultant and advisory services, (2) professional development (teacher education), (3) research, and (4) curriculum development.

In keeping with the terms and intent of the contracts, the activities of the professional staff include:

- 1) assisting personnel in Iowa's 15 area community colleges and vocational-technical institutes as they plan, implement, evaluate and revise their preparatory, inservice, and adult and continuing education programs in health occupations education and community education;
- 2) assisting secondary school personnel as they develop health career orientation, exploratory and aide-level programs;
- 3) abetting innovative and new approaches to the preparation of health care workers;
- 4) upgrading skills of teachers in health occupations education through preservice, inservice, and on- and off-campus offerings; and,
- 5) stimulating the collaboration of efforts among the various educational, professional, service and governmental groups interested in the education of health workers who function in roles supportive to health professionals.

The two contracting agencies believe that mutual benefits are derived from having consultative and teacher education personnel for health occupations education located at The University of Iowa. The geographic

ACTIVITIES OF THE
PROGRAM IN HEALTH OCCUPATIONS EDUCATION
THE UNIVERSITY OF IOWA



proximity of the Program in Health Occupations Education to the University's Medical Center, College of Education, and Extension Division enhances ready interaction among professionals in these areas. This enables a forum for fostering the exchange of ideas and philosophies, and for sharing developments and research planning for the preparation of health care workers and health career educators at all levels --- autonomous professional, allied professional, and vocational-technical. Through such sharing, opportunities for articulation between these levels of preparation can be explored; pursued; and, as feasible, brought to fruition.

ADMINISTRATION AND SCOPE OF LOCAL H.O.E. PROGRAMS

In Iowa, health occupations education programs are administered predominately by the State's 15 area schools (13 comprehensive community colleges and two vocational-technical institutes, some with satellite campuses) in cooperation with the Area School Branch of the Iowa Department of Public Instruction. Collectively, these 15 area schools offer 78 one- and two-year preparatory programs for 19 different types of health occupations. All are approved to offer short-term preparatory nurse aide-orderly programs as needed in their respective area. In addition, each area school employs at least one coordinator for HOE adult and continuing education who serves as liaison between the school and its community in arranging offerings for employed health workers seeking retraining or upgrading of skills and for consumer health education. These offerings, when and as approved and appropriate, provide opportunities for enrollees to gain credit for continuing education units (CEUs).

In recognition of achievement, graduates of two-year programs are granted an Associate in Applied Science degree; and one-year program graduates, a diploma. Those completing short-term; adult and continuing education; and health care aide (including aide preparation at the secondary level) are awarded a certificate.

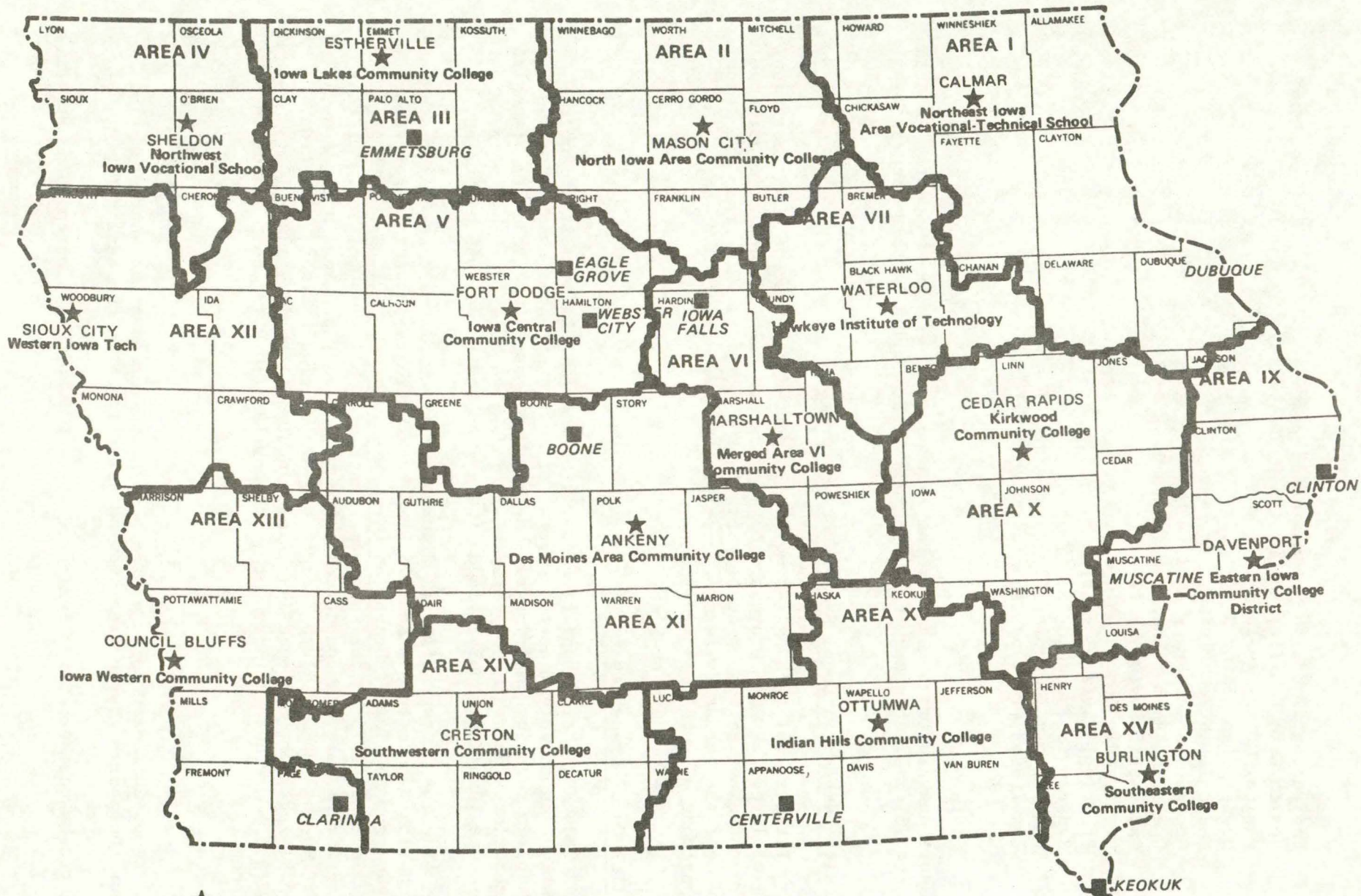
LOCAL PROGRAMS

Preparatory

Iowa's 13 community colleges and two technical institutes presently offer a total of 78 health occupations education preparatory programs of one or two years in length, representing 19 different types of preparation;

<u>Type</u>	<u>Number</u>
Associate Degree Nurse (2 years)	14
Dental Assistant (1 year)	8
Dental Hygienist (2 years)	2
Dental Lab Technician (2 years)	1
Electroencephalographic Technologist (2 years)	1
Environmental Health Assistant (1 year)	1

MERGED AREA SCHOOLS



★ ADMINISTRATIVE CENTER AND CAMPUS

■ OTHER CAMPUS (AREA SCHOOLS WITH MORE THAN ONE MAJOR CAMPUS)

Environmental Health Technician (2 years)	1
Health Care Facility Administrator (2 years)	1
Medical Office Assistant (1 year)	7
Medical Lab Assistant (1 year)	3
Medical Lab Technician (2 years)	1
Occupational Therapy Assistant (1 year)	1
Operating Room Technician (1 year)	6*
Optometric Assistant (1 year)	1
Orthopaedic Physician's Assistant (2 years)	1
Practical Nurse (1 year)	24**
Radiologic Technologist (1 year)	1
Respiratory Therapist (2 years)	2
Respiratory Therapy Technician (1 year)	2
	<hr/>
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A short description of each of the 19 types of preparation and the locations of the 78 existing preparatory programs are included in this document.

Faculty Members in Local Preparatory Programs

Totally, 351 (253 full-time and 98 part-time) instructional personnel are employed for the 78 preparatory programs. All instructional personnel have had experience as practitioners in the field in which they are teaching and meet the necessary teacher-certification requirements of the Iowa Department of Public Instruction.

Follow-Up of Graduates

Statistics are compiled annually by the Iowa Department of Public Instruction to determine the success of Iowa's preparatory program graduates securing employment. The placement rate for graduates of health occupations education programs remains high; to date there has been no evidence that the supply exceeds the demand for these health workers.

The most recent official figures for the employment status of graduates of health occupations education preparatory programs herein reported are taken from the Career Education Preparatory Student Follow-up, FY 1975 published in 1976 by the Iowa Department of Public Instruction. Of the 1959 individuals who completed an HOE preparatory program in the fiscal year ending June 30, 1975; 152 (8.6%) are continuing their education; 1552 (87.8%) are employed in a field related to their preparation; 63 (3.6%) are in other pursuits; and for 192 (10.9%); their status is unknown.

*Kirkwood Community College offers this program as a one-quarter option for those with appropriate previous experience in the health field.

**Includes one secondary-level program at Des Moines Technical High School.

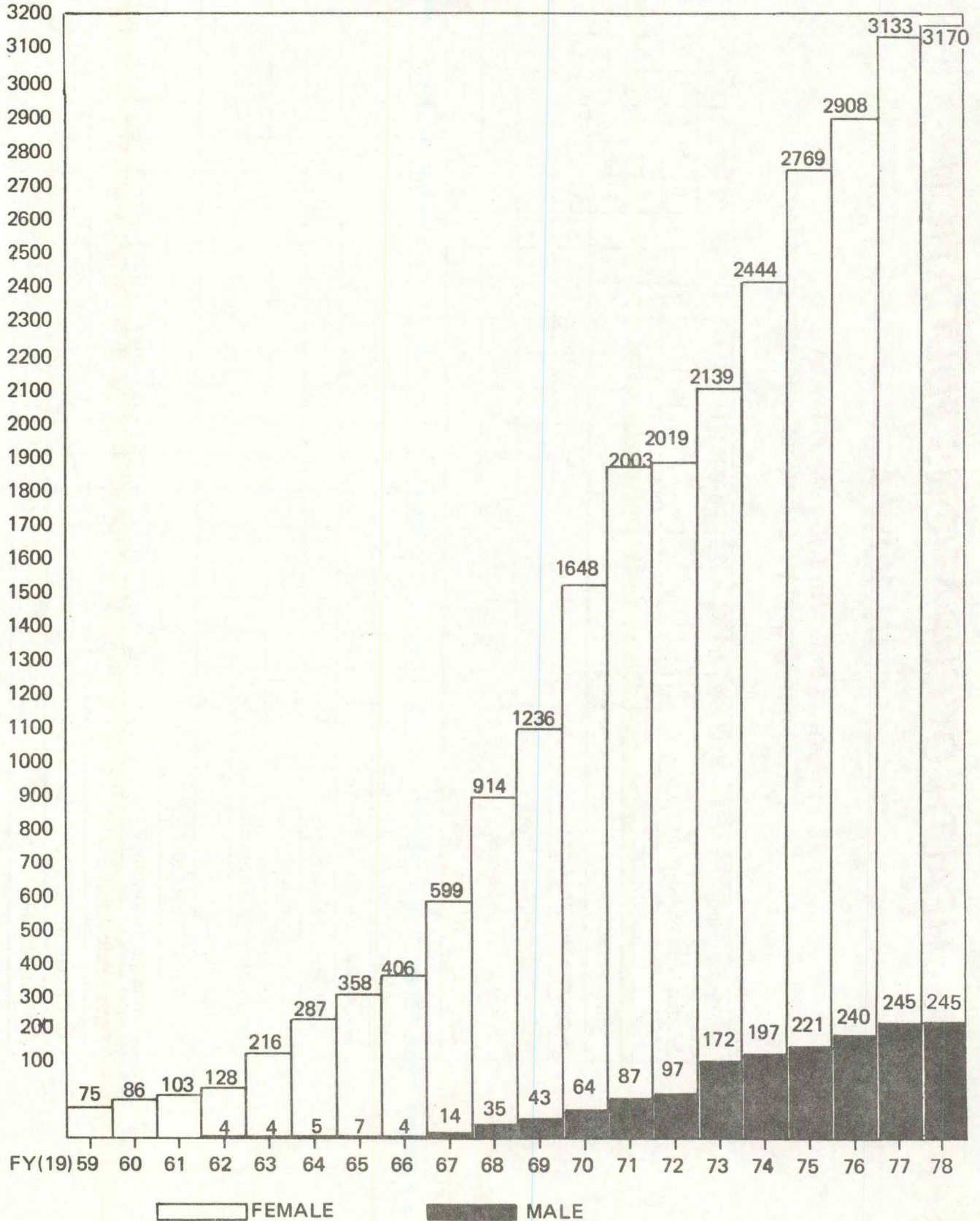
HEALTH OCCUPATIONS EDUCATION IN IOWA

NUMBER OF ONE- AND TWO-YEAR PREPARATORY
PROGRAMS, BY TYPE—FY's 1957 - 1978

Practical Nursing	2	3	4	4	5	5	8	11	11	13	19	19	19	20	23	23	23	23	24	24	24	24	
Medical Office Assistant									1	1	1	5	5	5	5	5	6	7	7	7	7	7	
Medical Lab. Assistant										1	1	3	4	4	4	4	4	4	4	3	3	3	
Dental Assistant												4	6	6	7	7	7	8	8	8	8	8	
Associate Deg. in Nursing												2	2	5	8	9	12	13	14	14	14	14	
Operating Room Technician												1	3	3	3	3	3	5	5	6	6	6	
Dental Lab. Technician													1	1	1	1	1	1	1	1	1	1	
Environmental Assistant													1	1	1	1	1	1	1	1	1	1	
Occupational Therapy Assist.													1	1	1	1	1	1	1	1	1	1	
Orthopaedic Physicians Assist.													1	1	1	1	1	1	1	1	1	1	
Health Care Facilities Admin.															1	1	1	1	1	1	1	1	
Respiratory Therapy																	1	2	2	2	2	2	
Medical Lab. Technician																		1	1	1	1	1	
Environmental Technician																		1	1	1	1	1	
Dental Hygiene																			1	2	2	2	
Respiratory Therapy Tech.																				2	2	2	
Radiologic Technology																					1	1	1
Optometric Assist.																						1	1
Electroencephalographic Tech.																							1
TOTAL NUMBER	2	3	4	4	5	5	8	11	12	15	21	34	43	47	55	56	62	70	73	76	77	78	
FY(19)	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	

HEALTH OCCUPATIONS EDUCATION IN IOWA

ONE- AND TWO-YEAR PREPARATORY PROGRAM
ENROLLMENTS FY 1959 - 1978



Adult and Continuing Education

Statistically, thousands of Iowans have found a new interest in the concept of lifelong learning and are participating in adult and continuing education programs offered by Iowa's fifteen merged area schools. This awareness has been prompted by the many new developments in career fields, the necessity for updating professional and vocational knowledge and skills, the need to acquire new skills, or simply to add new dimensions to their own horizons.

The area school system in Iowa has become a viable delivery system for a significant portion of continuing education in the health field. The adult education offerings fall into three categories: short-term preparatory; career supplemental education, including those providing information for health care workers at the professional level; and consumer health education.

Use of Telenet System

As a medium for continuing education in the health field, the "telenet" system within Iowa's merged area schools has gained rapid popularity and success. Initially it was used for continuing education for physicians through a series of three programs on new procedures for diagnosis and treatment of cancer. Since then, a number of health disciplines have utilized the telenet system for two-way interactive audio-teleconferencing. Teleconferencing is a distant two-way telephone discussion between two or more groups and rapidly is gaining popularity nationally in business, training and education.

During the past calendar year; clinical laboratory personnel, pharmacists and physical therapists have utilized this telenet system for their continuing education. A highly successful series for clinical laboratory personnel has attracted more than 3200 registrations. The programming has centered around slide and tape presentations from the Center for Disease Control in Atlanta, Georgia combined with a two-way question and answer session with the appropriate expert at CDC following each program. The pharmacy programs are currently being presented with video tapes produced and distributed from the Continuing Education Division of the College of Pharmacy, The University of Iowa. The physical therapists have used yet another technique in distributing original research from The University of Iowa and have utilized their teleconference time for discussion and consultation with the researcher.

Several of Iowa's area schools have begun serious investigation into "mini-systems" which would serve the population more comprehensively in those counties served by the school. Kirkwood Community College in Cedar Rapids will begin operating its mini-system in January of 1978 with terminals in five communities.

"Telenet" has proven itself to be an exciting medium for continuing education by allowing personnel, who ordinarily may not be able to attend classes in a medical campus setting to participate in programs and "meet" with peers. Telenet seems to be reaching a wide audience, many of whom are new to the area school and appreciating the opportunity to upgrade their skills through this method of delivery for continuing education.

ENROLLMENTS FY 1977 BY PROGRAM CATEGORY

Type of Program	Number Offered	Enrollees	Enrollment % Compared to 1976
One- and two-year Preparatory Programs	78	3,170	1%
Short-term Nurse Aide-Orderly Courses	117	1,744	12.8%
Adult & Continuing Education Courses	3,434	69,442	10.4%

Other Types of Programs Offered

Several area schools have established a pre-entry program for purposes of: (1) evaluating the interest, motivation, and abilities of disadvantaged individuals; and (2) providing what basic education and services are necessary to assist these individuals to improve their basic skills prior to admission into an ongoing preparatory program. Also, some area school HOE departments have become instrumental in forming voluntary consortia of health care facilities in their geographic area to encourage and expedite cooperation in planning and conducting continuing and inservice education courses.

There is noted growth in the implementation of programs in Iowa's secondary schools whereby students can explore careers in the health field and, as appropriate and desired, become prepared at the aide level in selected health occupations. Predominately, this preparation has been for the role of nurse aide-orderly.

PERSONNEL DEVELOPMENT (TEACHER EDUCATION FOR HOE FACULTY MEMBERS)

The University of Iowa's Program in Health Occupations Education, in cooperation with the College of Education and University Division of Continuing Education, provide a number of programs and activities for local health occupations education administrators and teachers. The offerings are provided on a credit or non-credit basis, dependent upon the interest of participants and the content, organization, and procedures used to provide the necessary services.

Conferences and Workshops

Annually, the professional staff of the Program in Health Occupations Education provides leadership for a planned Fall Conference for HOE teachers in Iowa. This annual conference is co-sponsored by the Program in Health Occupations Education, Iowa Department of Public Instruction, and the Health Occupations Education Association of Iowa.

Each year the Program in Health Occupations Education offers a state-wide Spring Teacher Education Workshop. Topics have ranged from core curricular and interdisciplinary approaches to learning styles and personality inventories. In addition, the Program has cooperated with the Iowa Health Occupations Education Association to offer a number of Leadership Development Workshops for health occupations education personnel in the Association as well as local program coordinators and department chairpersons.

In addition to these non-credit offerings, credit courses are provided in various regions of the State on an interest and need basis to enable people to meet Career Education Approval and Certification Requirements. These courses are typically offered in a workshop format and include areas in educational methodology such as teaching methods, student evaluation, curriculum development and historical and philosophical considerations in vocational and health occupations education. Credit and non-credit options have also been assigned to the Instrument for Comprehensive and Relevant Education (ICARE) faculty development workshop which has been offered at seven of Iowa's 15 area school districts.

Undergraduate and Graduate Degree Opportunities Offered by The University of Iowa.

The Program in Health Occupations Education also has had an active role in developing and staffing the University's undergraduate and graduate programs in health occupations education and health careers education. The masters degree program currently is administered by the Division of Instructional Design with an option for specialization in health careers education. Persons interested in working for an advanced graduate degree (EdS, EdD or PhD) enroll in programs offered by the Division of Instructional Design, Post-Secondary Continuing Education and other Divisions within the College of Education, depending on individual interest.

In November 1976, the State Board of Regents approved an under-graduate program in Health Occupations Education to be offered by The University of Iowa's Colleges of Liberal Arts and Education. This program requires that the applicant has completed a health specialty and that he/she is registered, certified, or licensed to practice this specialty prior to acceptance into the major. While the program is flexibly planned, it requires that students complete basic skills and core requirements of the Colleges of Liberal Arts, a 30-hour education major, and 10 hours of advanced specialization which may be achieved either in the basic sciences, offerings by a specific health college at the University, or additional hours in education. The fourteen students currently enrolled represent various health specialties offered in the State's community colleges.

LOCATION OF ONE- AND TWO-YEAR PREPARATORY
HEALTH OCCUPATIONS EDUCATION PROGRAMS
CURRENTLY OFFERED IN IOWA
FY 1978

PROGRAMS	AREA SCHOOLS	Admin. Center	Area No.	I		II		III		V		VI		VII		IX		X		XI		XII		XIII		XIV		XV		XVI		TOTALS							
				N.E. Ia. Area One Vocational-Technical School	Calmar	Dubuque	Northern Iowa Area Community College	Mason City	Iowa Lakes Community College	Estherville	Emmetsburg	Iowa Central Community College	Fort Dodge	Iowa Valley Community College District	Marshalltown	Hawkeye Institute of Technology	Waterloo	Eastern Iowa Community Coll. District	Davenport	Bettendorf	Clinton	Kirkwood Community College	Cedar Rapids	Des Moines Area Community College	Ankeny	Boone	Carroll	Western Iowa Tech. Comm. College	Sioux City	Cherokee	Iowa Western Community College		Council Bluffs	Harlan	Clarinda	Atlantic	Southwestern Community College	Creston	Indian Hills Community College
Associate Degree Nurse				x	x	x		x		x						x	x		x	x				x	x			x	x				x	x				14	
Dental Assistant					x					x	x	x							x	x				x	x														8
Dental Hygiene												x								x																			2
Dental Laboratory Technician																			x																				1
Electroencephalographic Tech.																			x																				1
Environmental Health Assistant																			x																				1
Environmental Health Tech.																			x																				1
Health Care Facility Admin.																					x																		1
Medical Laboratory Assistant													x									x																	3
Medical Laboratory Tech																						x																	1
Medical Office Assistant						x				x	x								x	x						x													7
Occupational Therapy Assistant																				x																			1
Optometric Assistant						x																																	1
Operating Room Technician											x								x	x				x		x													6
Orthopaedic Physician's Assistant																				x																			1
Practical Nurse				x*	x	x	x			x	x	x	x						x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			24
Radiologic Technology																					x																		1
Respiratory Therapy																				x	x																		2
Respiratory Therapy Tech.						x															x																		2
TOTALS				1	2	4	4	0	2	4	4	4	4	0	5	3	3	12	10	1	1	4	1	4	1	5	1	1	1	1	1	1	2	1	3	1			78

Notes: 1. Administrative Center of area schools in bold letters. *One Practical Nurse program is administered by Des Moines Technical High School
2. X indicates an existing program.

BRIEF DESCRIPTION OF EACH TYPE OF
ONE- AND TWO-YEAR PREPARATORY HEALTH OCCUPATIONS
PROGRAMS PRESENTLY OFFERED IN IOWA

1. Associate Degree Nurse

This two-year program prepares students to carry out nursing care measures and medically delegated techniques, using principles derived from the social, physical, and biological sciences. Classroom instruction is closely correlated and concurrent with selected learning experiences in hospitals and other health-care areas.

After successfully completing an approved program, upon passing a State Board Examination the graduate becomes a Registered Nurse (R.N.).

2. Dental Assistant

This one-year program offers classroom and laboratory activities correlated with clinical practice. The graduate is prepared to assist the dentist at chairside, perform secretarial duties and do those laboratory procedures which are done in the dental office.

Certification (C.D.A.) is granted following graduation from an approved educational program, passing qualifying examinations and completing a specified amount of work experience.

3. Dental Hygienist

This two-year program is designed to prepare graduates for positions in general and specialty dental offices, hospitals, schools, public health agencies and industrial agencies. Students are trained in educational methods and preventive clinical services which qualify them as dental health educators and competent clinicians. The emphasis is placed on the correlation between prevention, education, and the clinical phases of dental hygiene practice, and the basic and social sciences. Graduates of the program receive an associate degree in applied science. They are eligible to take the national, state, and regional licensure examinations in dental hygiene.

4. Dental Laboratory Technician

Graduates of this two-year program are skilled craftsmen who make dentures, crowns, bridges, and other dental and orthodontal appliances according to prescriptions provided by dentists. This member of the dental health team develops a high degree of skill in his chosen occupations through theoretical and laboratory studies which are well correlated throughout the program. Career opportunities are available in dental laboratories, individual dentist's office and in some hospitals.

Certification (C.D.T.) is gained through graduation from an approved program, passing an examination and completing a specified amount of satisfactory work experience.

5. Electroencephalographic Technologist

This two-year program prepares the graduate to perform tests which record the electrical activity of the brain. With supervision of a qualified physician, the EEG technologist prepares patients, operates the test instruments and obtains recordings for interpretation by qualified electroencephalographers. The curriculum is composed of correlated classroom and EEG laboratory experiences.

6. Environmental Health Assistant

Following completion of this one-year program, the environmental health assistant is prepared to assist sanitary engineers, sanitarians and other public health officials in safeguarding the health and welfare of both urban and rural communities by inspecting housing conditions, milk, water, sewage disposal facilities, air, food, and other potential health hazards. The curriculum is composed of correlated classroom, laboratory and field experiences.

7. Environmental Health Technician

This six quarter program prepares the graduate to assist engineers, sanitarians, physicians, veterinarians and others concerned with maintaining a health environment. The technician gathers data and samples of air, water and food and assists in their analyses. He also assists in the operation of water and waste water plants, solid waste disposal facilities, and inspects and evaluates facilities for compliance with laws and regulations. Additional functions include accident prevention, public health standards, rodent control and other similar areas related to environmental health.

8. Health Care Administrator

This two-year program prepares graduates to function in the administration of long-term care facilities. Program content emphasizes special problems of the aged; the provision of health and social services; and the legal, financial, and personnel aspects of administration. Learnings include both theory and practicum.

9. Medical Laboratory Assistant

This one-year program is designed to prepare qualified men and women to work in a medical laboratory under the supervision of a medical technologist or pathologist and/or other qualified physician. They perform routine laboratory procedures and tasks in the areas of bacteriology, blood banking, chemistry, parasitology, serology, and urinalysis.

10. Medical Laboratory Technician

This two-year program prepares graduates to perform selected clinical laboratory tests under the supervision of the medical technologist, pathologist or other qualified professional. These tests are in such areas as the blood bank, biochemistry, microbiology and hematology.

Certification is available to graduates who successfully pass an examination. In some cases they also must meet specified experience requirements.

11. Medical Office Assistant

This one-year program prepares the student to be employed in a private physician's office, clinic or hospital. Through correlated classroom, laboratory and clinical experiences, the student learns to prepare patients for examination, perform routine laboratory tests and assist in office and medical record keeping activities.

Certification may be granted following graduation from an approved educational program, passing qualifying examinations and completing a specified amount of work experience.

12. Occupational Therapy Assistant

This one-year program of classroom studies, laboratory experiences and clinical practice, prepares workers to give assistance to Registered Occupational Therapists in rehabilitative and therapeutic activities. The assistant becomes proficient in guiding and encouraging the patient in activities involving a variety of manual and creative areas for the attainment of specific treatment goals.

13. Operating Room Technician

Through this one-year program of classroom study, laboratory activities and clinical experience, the student learns to function under the direct supervision of the professional nurse or surgeon in the operating room. The activities of the operating room technician include preparation of surgical environment and serving as a "scrub" or "circulating" assistant during surgical procedures.

14. Optometric Assistant

One year in length, this program prepares graduates for employment as assistants to the optometrist in the diagnosis and management of vision related problems. The graduate, under supervision of the optometrist, performs a variety of functions such as office management, patient instructions, and technical skills such as selection, fabrication, fitting and care of eyewear.

15. Orthopaedic Physician's Assistant

This two-year program prepares graduates to work with the orthopaedic surgeon in the emergency room, case room, operating room, and other hospital areas as well as in clinics and private offices. Through correlated classroom, laboratory and supervised clinical experiences, the assistant is trained to prepare and maintain surgical equipment, assist in surgery, apply plaster casts and set up traction and suspension equipment.

16. Practical Nurse

This one-year program of concurrent classroom, laboratory, and clinical experiences prepares persons for employment in hospitals, nursing homes, doctors' offices and a variety of other health care facilities. The practical nurse gives nursing care to patients in situations relatively free of complexity and, in a close working relationship, assists registered nurses in giving nursing care to patients in more complex situations. Following successful completion of the program, graduates are eligible to write the licensure examination to become a Licensed Practical Nurse (L.P.N.).

17. Radiologic Technologist

This is a two-year program that prepares men and women working under the supervision of a radiologist and/or physician to assist in performing diagnostic procedures in x-ray departments. Typical duties include positioning patients; determining exposure; operating x-ray machines; taking, developing and critiquing films, assisting the M.D. in administering opaque substances for diagnostic tests; operating portable x-ray machines; and recording tests. Emphasis is placed on safety and accuracy in performing the above procedures. Upon successful completion of an AMA accredited program and passing the appropriate examination, the graduate will hold the title ARRT (American Registry of Radiologic Technologists).

18. Respiratory Therapist

Graduates of this two-year program function in a role primarily, but not limited to, cardiovascular care in the form of oxygen administration, ventilatory support, blood gas analysis, chest-physiotherapy and pulmonary rehabilitation. This role also often encompasses other related therapeutic and diagnostic functions such as pulmonary function testing, electrocardiography and cardiovascular monitoring. Graduates are eligible to take the written and oral registration examination offered by the American Registry of Respiratory Therapists.

19. Respiratory Therapy Technician

This one-year program is designed to prepare graduates for employment in hospital respiratory therapy departments. This involves performance of intermittent positive pressure breathing (IPPB), humidity/aerosol therapy, medical gas administration, pulmonary drainage procedures, and cardiopulmonary resuscitation. In addition, the graduate will be able to administer aerosolized drugs and implement infection control measures including aseptic techniques and handling of contaminated equipment.

Nurse Aide-Orderly Preparatory Programs

Nurse Aide-Orderly

Two types of nurse aide-orderly programs, both consisting of formal classroom instruction correlated with supervised clinical experience, are offered in Iowa:

*The first, a basic 60-hour course is designed to prepare individuals with the basic knowledge and skills necessary to function as a nurse aide in a nursing home or extended care facility. This course meets the requirements of the State Department of Health for certification of nurse aides employed in this type of facility.

*The second, a 120-hour course, also provides basic skills, but includes more depth and breadth in simple and routine nursing care procedures. This course is oriented more to employment in a hospital setting.

Addresses of Local Area School
Health Occupations Education Programs

N.E. Vocational-Technical School
142 Main Street
Calmar, Iowa 52132

N.E. Vocational-Technical School
3rd Floor, Dubuque Building
Dubuque, Iowa 52001

North Iowa Area Community College
500 College Drive
Mason City, Iowa 50401

Iowa Lakes Community College
101 1/2 Sixth Street
Estherville, Iowa 51334

Iowa Lakes Community College
3200 College Drive
Emmetsburg, Iowa 50536

Iowa Central Community College
330 Avenue M
Fort Dodge, Iowa 50501

Iowa Valley Comm. College District
22 West Main Street
Marshalltown, Iowa 50158

Marshalltown Community College
3700 South Center
Marshalltown, Iowa 50158

Hawkeye Institute of Technology
1501 East Orange Road
Waterloo, Iowa 50704

Eastern Iowa Comm. College District
3546 Brady Street
Davenport, Iowa 52806

Scott Community College
Belmont Road
Bettendorf, Iowa 52722

Clinton Community College
1000 Lincoln Blvd.
Clinton, Iowa 52732

Kirkwood Community College
6301 Kirkwood Blvd.
Cedar Rapids, Iowa 52406

Des Moines Area Community College
2006 Ankeny Blvd.
Ankeny, Iowa 50021

Des Moines Area Community College
1125 Hancock Drive
Boone, Iowa 50036

Des Moines Area Community College
South Clark Street
Carroll, Iowa 51401

Western Iowa Tech Community College
4647 Stone Avenue
Sioux City, Iowa 51102

Western Iowa Tech Community College
101 1/2 E. Main
Cherokee, Iowa 51012

Iowa Western Community College
2700 College Road
Council Bluffs, Iowa 51501

Iowa Western Community College
1018 1/2 Sixth Street
Harlan, Iowa 51537

Iowa Western Community College
923 E. Washington
Clarinda, Iowa 51632

Iowa Western Community College
Cass County Hospital
Atlantic, Iowa 50022

Southwestern Community College
1501 Townline Street
Creston, Iowa 50801

Indian Hills Community College
Ottumwa Industrial Airport
Ottumwa, Iowa 52501

Indian Hills Community College
North First Street
Centerville, Iowa 52544

Southeastern Community College
285 Messenger Road
Keokuk, Iowa 52632

Southeastern Community College
Drawer F, Highway 406
West Burlington, Iowa 52655

PUBLICATIONS

<u>Code</u>	<u>Title</u>	<u>Year</u>	<u>Price</u>
8201	<u>A Study of Social and Educational Factors and Success in Practical Nurse Education</u> , Elizabeth E. Kerr.	1962	Available on loan only.
8202	<u>Iowa Practical Nursing Sub-Study</u> , Elizabeth E. Kerr and Dale F. Petersen. Research report.	1966	No longer available.
8203	<u>Practical Nursing in Iowa: A Profile</u> , Elizabeth E. Kerr, Dale F. Petersen, F. Ronald Czaja. Research report.	1968	Available through ERIC. #ED 025651
8204	<u>Abstracts of Iowa Research in Health Occupations Education</u> , Thomas F. Tibbetts (Published by Research Coordinating Unit, Iowa Department of Public Instruction.)	1968	.50 Postage/Handling Limited quantity.
8205	<u>Teacher Education Institute for New Health Occupations Education Teachers</u> , Lewis D. Holloway. Final report, U.S.O.E. Project 8-0460.	1969	Available through ERIC. #ED 027443
8206	<u>Review and Synthesis of Research in Health Occupations Education</u> , Lewis D. Holloway and Elizabeth E. Kerr. Published by Center for Vocational Education, The Ohio State University, Columbus, Ohio.	1969	Available through ERIC. #ED 029982
8207	<u>Guidelines and Supportive Papers for Planning and Conducting Short Term Teacher Education Activities</u> , Lewis D. Holloway, U.S.O.E. Project 9-0340.	1970	Available through ERIC. #ED 037581
8208	<u>An Analysis of Selected Educational Programs in Practical Nursing</u> , Elizabeth E. Kerr, Dale F. Petersen, <u>et al.</u> Part II of the final report of the Iowa-Illinois Practical Nursing Study - U.S.O.E. Project 5-0126.	1970	\$2.50
8209	<u>Utilization and Preparation of Personnel for Our Health Care Delivery System(s)</u> . Elizabeth E. Kerr. Paper published June 1970.	1970	.50 Duplication and Postage.
8210	<u>An Overview of Health Occupations Education in Iowa</u>	Updated Annually	No charge for initial copy; additional copy .50 postage paid.

<u>Code</u>	<u>Title</u>	<u>Year</u>	<u>Price</u>
8212	<u>Pediatric Assistant: A Program Development Guide, Elizabeth E. Kerr, Dale F. Petersen, Grace Theresa Gould.</u>	1972	\$1.50
8213	<u>Iowa Health Occupations Education Follow-Up Study, Dale F. Petersen, Research report.</u>	1971	\$1.00 Postage/ Handling.
8214	<u>Developing Teaching Competencies Needed by Educational Personnel in Post- Secondary Health Occupations Programs, Lewis D. Holloway, Final Report, U.S.O.E. Project 9-0340.</u>	1971	Available through ERIC. #ED 060181
8215	<u>Homemaker Home-Health Aide Manual, Faye Strayer.</u>	1975	\$4.95 Postage Prepaid
8216	<u>Homemaker Home-Health Aide Education: Program Development, Teaching, and Evaluation, Faye Strayer</u>	1975	\$3.75 Postage Prepaid
8217	<u>Health Occupations Continuing Education: A Summary of Courses Offered By Iowa's Area Schools.</u>	Updated Annually	\$1.00 Postage/ Handling.

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