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REPORT
of the
GOVERNOR'S COMMISSION
to
STUDY NURSING
in
IOWA

Prepared by
OFFICE FOR PLANNING & PROGRAMMING
Division of State Planning
State of Iowa
1975

REPORT
of the
GOVERNOR'S COMMISSION
to
STUDY NURSING
in IOWA

Irene Talbott, Project Director

Prepared by Office for Planning and Programming
Division of State Planning
State of Iowa, 1975

Pursuant to Contract No. 75001, by and among:
The Governor's Commission to Study Nursing in Iowa
The Iowa Board of Nursing
The Office for Planning and Programming

Letter of Transmittal

June 30, 1975

The Honorable Robert D. Ray
Governor of Iowa
State Capitol
Des Moines, Iowa 50319

Dear Governor Ray:

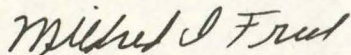
In keeping with your charge to study and make recommendations for nursing from which will evolve improved nursing care for the citizens of Iowa, the Commission members now submit their final report.

This report is divided into five chapters: Chapter One, statistical data relative to nursing in Iowa; Chapter Two, preparatory education; Chapter Three, continuing education; Chapter Four, nursing practice. The recommendations of the Commission appear in Chapter Five.

Appointed October 17, 1972, the Commission first met in June, 1973. The Commission has met fifteen times during the past two years. Our work has also included deliberation and meetings of advisory committees appointed by the Commission.

This Commission report makes recommendations regarding the practice of nursing, Code of Iowa and the Rules and Regulations of the Iowa Board of Nursing, as well as general recommendations regarding nursing education, continuing education and nursing practice. All members of the Commission hope that their deliberations and recommendations will help the citizens of Iowa, the legislators and the Iowa Board of Nursing.

Respectively,



(Miss) Mildred I. Freel, R.N.
Chairman
Commission To Study
Nursing In Iowa

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PREFACE

A current analysis of existing conditions and trends is essential for the planning and delivery of health care in Iowa. The largest of the health professions, nursing, plays a major role in the health care system. Therefore, the Iowa Board of Nursing which is the agency legally accountable for nursing education and practice, proposed on November 8, 1971 that the Honorable Robert D. Ray, Governor, State of Iowa, appoint an autonomous Commission to Study Nursing in Iowa.

The purpose of this Commission would be to study, and make recommendations relevant to nursing education, nursing practice and continuing education for nurses. Representation and input was clearly needed from a broad spectrum of nursing educators, nursing practitioners, associate providers and consumers. To meet this need, the Iowa Board of Nursing invited numerous agencies and organizations in nursing and health care fields to submit nominations to Governor Ray.

On October 2, 1972 Governor Ray appointed the Commission to Study Nursing in Iowa. This report is the result of the two-year study conducted by the Commission.

The Commissioners wish to express appreciation to Governor Ray for appointing the Commission; to members of the First Regular Session of the 65th General Assembly of the State of Iowa for appropriating funds for conducting the study; to the members of Advisory Committees for their invaluable contributions; and to the Iowa Board of Nursing for proposing the study and for helping to make data available.

The Commissioners are also indebted to the thousands of nurses across Iowa who responded to the Commission survey; to the administrators and faculty members of Iowa's nursing programs; to the administrators and nursing personnel of Iowa's health care facilities; and to the numerous agencies, organizations and individuals who participated in the study.

Chapter One

STATISTICAL SURVEY

Nurses comprise by far the largest group of health care personnel in the State of Iowa.

Nurses are licensed in two categories by the Iowa Board of Nursing: registered nurses and licensed practical nurses. To qualify for licensure as a registered nurse, the Code of Iowa states that an applicant must:

Be a graduate of an accredited high school or the equivalent and have completed a course of study in, and hold a diploma issued by a school of nursing for registered nurses approved by the Board of Nurse Examiners; and

Pass an examination prescribed by the Board of Nurse Examiners which shall include but not be limited to the subjects of medical nursing, surgical nursing, nursing of children, obstetric and gynecologic nursing, psychiatric nursing and communicable disease nursing.¹

To qualify for licensure as a licensed practical nurse, the Code of Iowa states that an applicant must:

Be a graduate of an accredited high school or the equivalent and have successfully completed a course of integrated study in and hold a diploma from a school of nursing for licensed practical nurses approved by the Board of Nurse Examiners or have successfully completed at least one year of a course of study in a school of nursing for registered nurses and have completed all clinical training as is required for a licensed practical nurse; and

Pass an examination on subjects relating to the duties and services of a licensed practical nurse as defined in section 152.1. Said examination, however, shall be based only on the subjects of sanitation, hygiene and the practical application of bedside practice which shall reflect a fair test of the applicant's ability to care for patients in bedside practice.²

The Governor's Commission to Study Nursing in Iowa (hereafter referred to as the Commission) accepts as adequate for legal interpretation the definition of nursing practice as now stated in the Code of Iowa:

For the purpose of this title any person shall be deemed to be engaged in the practice of nursing as a registered nurse who performs any professional services requiring the application of principles of biological, physical or social sciences and nursing skills in the observation of symptoms, reactions and the accurate recording of facts and carrying out of treatments and medication prescribed by licensed physicians in the care of the sick, in the prevention of disease or in the conservation of health.

For the purpose of this title the practice of nursing as a licensed practical nurse shall mean the performance of such duties as are required in the physical care of a convalescent, a chronically ill or an aged or infirm patient, and in carrying out such medical orders as are prescribed by a licensed physician or nursing services under the supervision of a registered nurse, requiring the knowledge of simple nursing procedures but not requiring the professional knowledge and skills of a registered nurse.³

In this report the term "nurses" means both registered nurses (hereafter referred to as RNs) and licensed practical nurses (hereafter referred to as LPNs) unless otherwise specified.

Nursing licenses expire annually; for renewal the nurse must submit an application form and \$4.00 to the Iowa Board of Nursing. A license may be placed in inactive status at the request of the nurse. Some nurses maintain active licenses even though they are not employed in nursing. Therefore, distinctions are made in this chapter between nurses employed and nurses holding active licenses.

Iowa's Supply of Nurses

There are 27,956 RNs with Iowa licenses and Iowa addresses. 19,145 hold active licenses, but only 14,561 are employed in nursing; of these 8,756 are employed full-time. When part-time RNs are considered to be working half-time, there are 11,658.5 full-time equivalents (FTEs) employed in Iowa. There are 10,048 LPNs with Iowa licenses and Iowa addresses. 7,817 hold active licenses, but only 5,977 are employed in nursing; of

these 3,197 are employed full-time. When part-time LPNs are considered to be working half-time, there are 4,987 full-time equivalents (FTEs) employed in Iowa. (Data from the 1974 Iowa Board of Nursing Licensure Statistics, February, 1975.)⁴

The county distribution of these nurses appears in Tables 1.1 and 1.2. This information is based upon Iowa Board of Nursing statistics for 1974-75, current as of June 30, 1974. The "total licenses" data includes nurses whose licenses are delinquent or inactive. All of the licensees included have Iowa addresses, though they may not be employed in the county of residence. In reading the employment data one should be aware that the Iowa Board of Nursing data bank has not always been correctly purged of incomplete entries. For example, a nurse who entered employment status in a past year but who did not fill out that section of the form in the current year may still be registered as employed on the basis of the outdated information.

Based on the assumption that all nurses registered as part-time are employed half-time (some may in fact work more or less than 20 hours per week,) employed full-time equivalents were calculated by adding full-time employed nurses and half of the part-time employed nurses per county.

Despite these qualifications, however, the tables present a general picture of the distribution of nurses and their employment status.

Table 1.1

Registered Nurse License and Employment Statistics
and County Population Ratios

	RN Total Licenses	RN Active Licenses	Employed RN	% Active License Holders Employed	Active License Nurse to Population Ratio	Employed Full-Time Equivalent
Adair	60	43	34	79.0%	1:221	26.5
Adams	71	28	20	71.4%	226	15.5
Allamakee	127	88	67	76.1%	170	53
Appanoose	82	46	39	84.8%	326	35
Audubon	66	54	43	79.6%	177	33
Benton	115	85	69	81.2%	269	52
Black Hawk	1143	776	615	79.3%	171	495.5
Boone	215	151	102	67.5%	175	85
Bremer	195	133	96	72.2%	171	75
Buchanan	159	110	85	77.3%	198	70
Buena Vista	182	128	92	71.9%	162	64.5
Butler	96	68	45	66.2%	249	33
Calhoun	140	104	76	73.1%	137	57
Carroll	272	169	124	73.4%	136	93
Cass	132	85	57	67.1%	200	44
Cedar	269	97	64	66.0%	182	52
Cerro Gordo	573	407	307	75.4%	121	254
Cherokee	206	137	96	70.1%	126	77.5
Chickasaw	105	65	48	73.8%	230	37
Clarke	39	29	25	86.2%	261	19.5
Clay	141	108	86	79.6%	171	67
Clayton	127	87	68	78.2%	237	51.5
Clinton	601	421	320	76.0%	135	258
Crawford	141	99	68	68.7%	190	56
Dallas	239	176	125	71.0%	148	100.5
Davis	80	64	52	81.3%	128	45.
Decatur	63	40	27	67.5%	243	21
Delaware	119	89	60	67.4%	211	46.5
Des Moines	506	349	276	79.1%	135	233
Dickinson	95	61	38	62.3%	206	29.5
Dubuque	1311	860	700	81.4%	105	567
Emmet	125	76	58	76.3%	184	44.5
Fayette	173	107	74	69.2%	251	57.5
Floyd	180	118	88	75.0%	168	65
Franklin	84	62	45	72.6%	214	38
Fremont	59	41	27	65.9%	226	21.5
Greene	149	122	78	63.9%	104	54.5
Grundy	104	76	53	69.7%	186	41.5
Guthrie	85	54	47	87.0%	227	35.5
Hamilton	164	106	83	78.3%	173	61
Hancock	103	71	50	70.4%	186	37
Hardin	196	144	102	70.8%	155	72
Harrison	76	52	35	67.3%	312	27.5
Henry	189	127	86	67.7%	143	71
Howard	67	46	36	78.3%	249	78.5
Humboldt	110	77	53	68.8%	163	38.5
Ida	68	49	36	73.5%	188	24
Iowa	126	80	63	78.8%	193	47
Jackson	164	122	89	55.1%	171	69
Jasper	222	163	136	83.4%	217	100.5
Jefferson	135	88	67	76.1%	179	52
Johnson	2027	1307	1072	82.0%	55	924.5

Table 1.1
(Continued)

Jones	148	105	78	74.3%	189	62
Keokuk	118	76	44	57.9%	183	33.5
Kossuth	160	102	73	71.6%	225	48.5
Lee	395	281	219	77.9%	153	179.5
Linn	1623	1146	845	73.7%	142	678
Louisa	73	58	39	67.2%	184	30
Lucas	64	51	35	68.6%	199	26.5
Lyon	66	41	26	63.4%	325	20.5
Madison	76	59	38	64.4%	196	26.5
Mahaska	180	113	87	77.0%	196	68.5
Marion	244	194	149	76.8%	136	119.5
Marshall	476	336	267	79.5%	122	217
Mills	87	63	44	69.8%	184	38
Mitchell	101	70	56	80.0%	187	42
Monona	91	68	52	76.5%	177	43
Monroe	58	40	32	80.0%	234	26
Montgomery	101	75	59	78.6%	170	46.5
Muscatine	349	248	169	68.1%	150	134
O'Brien	135	90	62	68.8%	195	43
Osceola	52	34	28	82.4%	251	21
Page	139	97	76	78.4%	191	58
Palo Alto	148	91	78	85.7%	146	58.5
Plymouth	254	170	122	71.8%	143	83
Pocahontas	118	76	56	73.7%	167	46.5
Polk	3343	2328	1806	77.6%	123	1506.5
Pottawattamie	799	584	463	79.3%	149	389
Poweshiek	146	99	75	75.8%	190	59
Ringgold	29	17	13	76.5%	374	10.5
Sac	129	95	72	75.8%	164	48.5
Scott	1475	959	744	77.6%	149	598
Shelby	128	91	62	68.1%	171	43.5
Sioux	214	146	108	74.0%	192	78.5
Story	833	481	372	77.3%	131	295
Tama	123	88	62	70.5%	229	50
Taylor	31	22	14	63.6%	397	12
Union	99	63	47	74.6%	215	37
Van Buren	43	33	24	72.7%	262	17.5
Wapello	349	235	178	75.7%	179	150.5
Warren	179	141	105	74.5%	195	80
Washington	242	160	119	74.4%	119	92.5
Wayne	36	18	15	83.3%	467	12
Webster	580	402	285	70.9%	120	220.5
Winnebago	94	64	54	84.4%	203	85.5
Winneshiek	161	106	78	73.6%	205	61
Woodbury	1359	914	732	80.1%	113	596.5
Worth	61	41	29	70.7%	219	21
Wright	131	96	66	68.7%	180	53

Sources: Iowa Board of Nursing Licensing Data, 1974, unpublished.
U.S. Census Bureau, 1970.

Table 1.2

Licensed Practical Nurse License and Employment Statistics
and County Population Ratios

	LPN Total Licenses	LPN Active Licenses	Employed LPN	% Active License Holders Employed	Active License Nurse to Population Ratio	Employed Full-Time Equivalent
Adair	32	22	17	77.3%	1:431	13.5
Adams	15	12	11	91.6%	537	8.5
Allamakee	66	44	31	70.4%	340	24
Appanoose	65	50	39	78.0%	300	31.5
Audubon	41	36	13	36.0%	265	10
Benton	50	39	33	84.6%	586	25.5
Black Hawk	637	498	400	80.3%	267	334
Boone	113	88	69	82.0%	301	58.5
Bremer	67	57	42	73.7%	399	35.5
Buchanan	76	61	39	63.9%	356	33.5
Buena Vista	55	43	30	69.8%	481	22.5
Butler	67	60	44	73.3%	283	35
Calhoun	51	37	26	70.3%	386	20
Carroll	169	143	82	57.3%	160	59
Cass	57	49	45	91.8%	347	37.5
Cedar	43	31	19	61.3%	570	12.5
Cerro Gordo	208	163	128	78.5%	303	109
Cherokee	104	78	51	65.4%	221	42
Chickasaw	73	60	41	68.3%	249	32
Clarke	30	27	23	85.2%	281	19.5
Clay	41	32	22	68.8%	577	17.5
Clayton	60	41	32	78.0%	503	25
Clinton	207	178	126	70.8%	318	107.5
Crawford	59	50	40	80.0%	376	31
Dallas	123	92	65	70.7%	284	52.5
Davis	26	26	16	61.5%	316	13.5
Decatur	24	16	11	68.8%	609	9.5
Delaware	55	47	32	68.1%	399	29.5
Des Moines	140	113	87	77.0%	416	72.5
Dickinson	45	34	20	58.8%	370	15.5
Dubuque	407	311	273	87.8%	291	226
Emmet	62	54	39	72.2%	259	33.5
Fayette	99	68	53	77.9%	395	41.5
Floyd	64	52	39	75.0%	382	33.5
Franklin	24	18	11	61.1%	736	9
Fremont	58	43	31	72.1%	216	27
Greene	43	31	25	80.6%	410	19
Grundy	34	22	19	86.4%	641	15
Guthrie	34	27	22	81.5%	453	15
Hamilton	36	24	18	75.0%	766	13.5
Hancock	36	29	17	58.6%	456	12.5
Hardin	59	47	35	74.4%	473	28.5
Harrison	67	53	43	81.1%	306	35.5
Henry	38	29	25	86.2%	625	21
Howard	36	23	20	87.0%	497	15.5
Humboldt	26	20	19	95.0%	626	17
Ida	30	26	18	69.2%	353	13
Iowa	41	33	22	66.6%	467	19.5
Jackson	52	37	30	81.1%	563	23
Jasper	78	56	44	78.6%	632	36
Jefferson	31	16	16	100 %	986	13
Johnson	343	260	235	90.4%	277	207.5

Table 1.2
(Continued)

Jones	49	36	21	58.3%	552	18
Keokuk	28	21	13	61.9%	664	10
Kossuth	65	55	30	54.4%	417	25
Lee	88	69	59	85.5%	623	53
Linn	595	468	350	74.8%	349	292
Louisa	25	20	18	90.0%	534	15.5
Lucas	47	34	24	70.6%	299	20
Lyon	26	21	16	76.2%	635	12.5
Madison	31	26	20	76.9%	445	19.5
Mahaska	71	50	33	66.0%	443	29
Marion	109	96	78	81.3%	275	68
Marshall	184	144	98	68.0%	285	81.5
Mills	53	47	40	85.1%	247	36.5
Mitchell	59	40	33	82.5%	327	24.5
Monona	32	25	18	72.0%	483	15.5
Monroe	71	36	27	75.0%	260	22.5
Montgomery	55	49	37	75.5%	261	30.5
Muscatine	72	53	45	84.9%	702	39.0
O'Brien	57	41	29	70.7%	427	23.5
Osceola	26	21	12	57.1%	407	9
Page	149	114	86	75.4%	162	74
Palo Alto	49	37	22	59.5%	359	17.5
Plymouth	68	52	36	69.2%	468	30
Pocahontas	29	21	12	57.1%	606	8.5
Polk	997	779	658	84.5%	367	562.5
Pottawattamie	260	205	153	74.6%	424	133
Poweshiek	27	23	17	73.9%	818	13.5
Ringgold	22	19	15	78.9%	335	14.5
Sac	52	39	30	76.9%	399	25
Scott	466	353	280	79.3%	404	236
Shelby	86	72	45	62.5%	215	34
Sioux	108	70	51	72.9%	400	34.5
Story	224	177	137	77.4%	355	115
Tama	55	45	33	73.3%	448	27
Taylor	41	30	21	70.0%	291	19.5
Union	55	44	33	75.0%	308	27.5
Van Buren	23	18	13	72.2%	480	10.5
Wapello	251	196	149	76.0%	215	129.5
Warren	63	53	38	71.7%	517	31.5
Washington	67	49	40	81.6%	387	46.5
Wayne	30	26	18	69.2%	323	16
Webster	140	107	87	81.3%	452	71.5
Winnebago	46	32	27	84.4%	406	19.5
Winneshiek	89	65	40	61.5%	335	30
Woodbury	388	292	264	73.3%	353	178
Worth	28	22	17	77.3%	408	13.5
Wright	27	19	16	84.2%	910	15

Sources: Iowa Board of Nursing Licensing Data, unpublished.
U.S. Census Bureau, 1970.

Methodology

The Commission enclosed a questionnaire with Iowa Board of Nursing license renewal forms for 1974. Data from these two sources were cross-tabulated (see appendix A). Only individuals who returned both forms were included in the study's cross tabulations. Cross-tabulations were matched by license number. This procedure insures the validity of statements which include information from both forms. 51.8% of the RNs (11,222 of 21,654) and 50.6% of the LPNs (3,528 of 6,975) who had renewed licenses as of June 30, 1974 returned both questionnaires in usable form.⁵

Simple cross-tabulated counts were made by computer; percentages were then calculated. (For example, the percentage of the RNs or LPNs reporting full-time employment in a hospital who also reported that they earn \$500-699 a month.)

Since all respondents did not answer all questions, each table using Commission Survey data cites the percentage of response upon which it is based. Throughout this report, the term "Commission Survey" is used when citing (1) cross-tabulated data from the Iowa Board of Nursing renewal form and data from the Commission questionnaire, or (2) data solely from the Commission questionnaire.

Characteristics of Nurse Employment

One factor important to the assessment of nurse supply is the age distribution among nurses. Another factor is the percentage of licensed nurses who are actually employed in nursing.

The percentage of nurses in each age group who responded to the survey, and the percentages of total unemployed, part-time employed, and full-time employed nurses in each age group, are shown in tables 1.3 and 1.4. RNs from graduation to 24 years old compose 17.4% of the full-time employed nurse population, but they compose only 2.1% and 4.1% of the unemployed and part-time employed nurse population. When each age

group's percentage representation in the total nurse population is compared with representation in each employment category, it is apparent that LPNs and RNs from graduation through age 24 and from ages 45-64 are most likely to be employed full-time. Nurses aged 25-44 are most likely to be unemployed or employed part-time.

Table 1.3
Percentage of Registered Nurses by Age Group
and by Employment Status

Age	% Total RNs by Age	% Total Unemployed	% Total Part-time Employed	% Total Full-time Employed
74-65	3 %	6.4%	2.3%	2.0%
64-55	10.	10.6	6.6	11.6
54-45	21.	19.5	18.7	23.1
44-35	24.8	30.6	30.4	19.2
34-25	30.5	30.5	37.8	26.4
24-18	10.4	2.1	4.1	17.4

Source: Commission Survey, 96.5% of sample responding

Table 1.4
Percentage of Licensed Practical Nurses by Age Group
and by Employment Status

Age	% Total LPNs by Age	% Total Unemployed	% Total Part-time Employed	% Total Full-time Employed
74-65	1.7%	3.3%	2.0%	1.2%
64-55	8.3	5.4	5.3	9.9
54-45	15.4	10.2	13.9	17.5
44-35	17.7	16.5	19.8	17.3
34-25	32.3	48.2	41.4	24.1
24-18	24.5	16.5	17.6	29.6

Source: Commission Survey, 98% of sample responding

Of concern is the relatively large percentage of licensed nurses who do not practice. Each county's reservoir of nurses holding active licenses who are not employed in nursing was presented at the beginning of this chapter, (Tables 1.1 and 1.2.) The column "percent of active license holders employed" was calculated by dividing the number of employed nurses by the number of active licenses in the county. In 28 counties,

80% or more of LPNs holding active licenses are employed; for RNs this is true in only 17 counties. However, in 14 counties, 65% or less of LPNs with active licenses are employed; for RNs this is true in only 7 counties.

Information by county regarding the extent to which resident nurses are employed is presented in order to point out that future efforts toward increasing the supply of nurses might follow two patterns: (1) Programs to encourage nurses already residing in the area to become employed or to increase their hours of employment could be worthwhile in those counties where relatively small percentages of nurses holding active licenses are employed; or where a relatively large number of nurses hold inactive or delinquent licenses (see "Total Licenses" column on Tables 1.3 and 1.4); or where larger proportions of nurses work part-time. (2) In those counties having a smaller reservoir of prepared nurses from which to draw, more emphasis on attracting new nurses to the area may be appropriate.

The National Commission to Study Nursing and Nursing Education has summarized many of the reasons why licensed nurses are not employed in nursing. (Chapter Four of this document addresses some of them.) Briefly, they include such factors as:

1. Lack of nurse control over nurse practice
2. Lack of opportunity to use the knowledge and skill they possess
3. Lack of opportunity for direct patient care, teaching, etc.
4. Low salary and benefits⁶

In addition, child rearing appears to be a factor--given the age of nurses who tend to be unemployed and the ages at which they tend to be more than proportionately employed.

Full-time and Part-time Employment

The distinction between nurses who work full-time and those who work part-time is important for at least two reasons. Part-time workers who could work full-time represent a potential for increasing the supply of nursing care available to Iowa citizens. Conversely, some nurses might

not practice at all, because of other obligations, if only full-time employment were available.

Cross-tabulations were made for RNs to find the percentage of nurses employed full-time by type of position held; by field of employment, or setting, in which they work; and by major clinical area of practice. Overall, 64% of the RNs in the Commission Survey reported working full-time.

Table 1.5
Percentage of Registered Nurses
Holding Various Positions, Employed Full-Time and Part-Time

Position	Percent Full-Time	Percent Part-Time
Administrator	90.8%	9.1%
Consultant	79.2	20.7
Supervisor	75.8	24.1
Instructor	71.4	28.5
Head Nurse	81.3	18.6
General Staff	54.5	45.6
Other	72.6	27.3

Source: Commission Survey, 75.9% of sample responding

By type of position, 90.8% of the administrators and 81.3% of the head nurses in the Commission Survey work full-time. Part-time employment was most frequent among general staff (45.5%) and instructors (28.5%).

Table 1.6
Percentage of Registered Nurses in
Various Clinical Areas, Employed Full-Time

Major Clinical Area	Percent Employed Full-Time
Geriatrics	55.0%
Gynecology/OB	53.6
Medical/Surgical	65.1
Pediatrics	69.2
Psychiatric	92.3
Other	70.9
General Practice	57.8

Source: Commission Survey, 75.7% of sample responding

By major clinical areas, psychiatric and "other" specialists were most likely to be employed full-time; gynecology/OB (53.6%) and geriatrics (55%) had the lowest percentages of full-time nurses.

Table 1.7
Percentage of Registered Nurses in
Various Fields of Employment, Employed Full-Time

Field of Employment	Percent Employed Full-Time
Hospital	63.0%
Nursing Home	51.5
School of Nursing	79.3
Private Duty	48.4
Public Health	78.7
School Nurse	68.6
Industrial	81.8
Doctor's Office	63.3
Other	70.6

Source: Commission Survey, 76.2% of sample responding

By field of employment, RNs in industrial settings (81.8%) and public health nurses (78.7%) were most likely to be working full-time. RNs employed in private duty (48.4%) and nursing homes (51.5%) were least likely to be employed full-time.

The Commission Survey found 59.7% LPNs employed full-time, 24.1% employed part-time and 16% unemployed. (91% of those surveyed responded to this question.)

By field of employment, most LPNs work in hospitals (59.9%) or nursing homes (24.8%). The highest percentages of full-time employed LPNs are in industrial, office, and "other" settings; smaller percentages of LPNs employed as private duty or public health nurses worked full-time.

Table 1.8

Percentage of Licensed Practical Nurses in Various Fields of Employment
and Percent Employed Full-Time

Field of Employment	Percent in Field	Percent Employed Full-Time
Hospital	59.9%	72.9%
Nursing Home	24.8	67.3
Private Duty	1.4	48.7
Public Health	.6	55.5
Industry	.5	92.3
Office	8.7	80.3
Other	4.0	80.2

Source: Commission Survey, 80.8% of sample responding

In general, Iowa nurses tend to be young (see Tables 1.3 and 1.4), with relatively few years of experience. As shown in Table 1.9, 47.2% of the RNs and 67.5% of the LPNs have practiced five years or less; 56.1% of the RNs and 79.5% of the LPNs have practiced seven years or less. A larger percentage of RNs than LPNs are married. Among RNs in practice 14 or more years, the percentage of married nurses falls. These figures suggest either that (1) more of these nurses are single and have worked steadily, or (2) by the time nurses are old enough to have this much experience, they may be widowed or divorced. Such a trend is not as strong among LPNs.

Table 1.9

Registered Nurses by Years of Experience in Nursing Practice
and Percentage Married

Years in Practice	Percentage by Years in Practice	Percentage Married
1	9.8%	76.9%
2	11.6	86.1
3	10.4	89.5
4	8.1	88.7
5	7.3	88.2
6-7	8.9	88.7
8-9	5.9	85.6
10-11	6.7	86.9
12-13	4.0	81.3
14-15	5.0	78.9

Table 1.9

Registered Nurses by Years of Experience in Nursing Practice
and Percentage Married
(Continued)

Years in Practice	Percentage by Years in Practice	Percentage Married
16-19	4.8	75.6
20-25	9.1	71.9
Over 25	<u>8.3</u>	<u>49.9</u>
	100%	

Source: Commission Survey, 99.9% of sample responding

Table 1.10

Licensed Practical Nurses by Years of Experience
in Nursing Practice and Percentage Married

Years in Practice	Percentage by Years in Practice	Percentage Married
1	17.9%	62.0%
2	15.1	74.3
3	13.9	78.4
4	10.5	74.8
5	10.0	74.0
6-7	11.9	78.0
8-9	6.4	72.2
10-11	4.3	71.5
12-13	2.8	68.7
14-15	2.3	70.7
16-19	.9	72.9
20-25	3.0	58.3
Over 25	<u>.5</u>	<u>65.0</u>
	100.0%	

Source: Commission Survey, 99.9% of sample responding

Salary Data

The Commission Survey asked for nurses' monthly salaries for 1974, by \$200 interval ranges. Full-time employed nurses were isolated by computer. Tables 1.11 through 1.16 summarize the findings. In each table, the bottom line shows the overall salary distributions for all full-time employed LPNs or RNs. The far right hand column shows the overall percentage distribution of full-time nurses by the other factor examined.

In general, salaries are low. The National Commission to Study Nursing and Nursing Education cited low salary rates as a prime concern⁷, and the Iowa data bear this out. Fifty-five percent of the full-time LPNs earn only \$300 - \$499 a month. RNs are concentrated in the \$500 - \$699 and \$700 - \$899 brackets, (37.5% and 33.9% respectively), with only 19.5% earning more than \$899.

Salaries for both LPNs and RNs tend to increase as years of experience increase (Tables 1.11 and 1.12). But even among nurses with over 25 years of experience, 80% of the LPNs and 5.5% of the RNs earn less than \$500 a month. Information about length of tenure in the current place of employment is not available. Some of these nurses may have worked part-time for several years; others may be new to their current place of employment. Nonetheless, their salaries are low.

Tables 1.13 and 1.14 show salary range for RNs by field of employment. Employment in a school, in an office, or in a nursing home tends to pay relatively lower salaries. Higher salaries go to nurses in public health, in industrial settings, or in schools of nursing. Nursing homes pay LPNs less also, while LPNs in industrial or public health settings earn relatively more.

LPNs do not submit information to the Iowa Board of Nursing regarding type of position or major clinical area of practice. By type of position held, RN salaries for administrators, instructors, and consultants tend to be relatively high. Also, supervisors and head nurses receive slightly higher pay than general staff. (Table 1.15).

Psychiatric nursing appears to be the highest paid major clinical area of practice, with "general" nursing and geriatric nursing salaries tending to be lower.

Table 1.11

Percentage of Full-Time Employed Registered Nurses With Various Numbers of Years in Practice, by 1974 Monthly Salary Range

Full-Time Monthly Salary Range

Years in Practice	\$0-299	\$300-499	\$500-699	\$700-899	\$900-1099	\$1100-1299	\$1300 up	Total % With Year's Practice	Total # With Year's Practice	% Total Full-Time RNs With Given Year's Practice
1	.7%	16.2%	53. %	28.4%	1.7%	%	%	100%	563	10.5%
2	1.6%	11.3%	48.3%	34.9%	3.5%	.4%	%	100%	487	9.1%
3	1.0%	11.4%	48.0%	31.6%	6.5%	.8%	.5%	100%	367	6.8%
4	.6%	8.7%	40.1%	38.2%	10.2%	1.5%	.6%	100%	322	5.9%
5	2.5%	3.8%	36.9%	42.0%	10.2%	3.8%	.6%	100%	314	5.8%
6-7	.8%	6.3%	34.3%	42.5%	10.5%	3.3%	2.5%	100%	400	7.4%
8-9	1.6%	4.4%	34.2%	37.7%	13.3%	5.4%	3.5%	100%	316	5.8%
10-11	.3%	7.1%	36.8%	33.1%	14.0%	6.0%	2.5%	100%	350	6.5%
12-13	.8%	5.9%	31.8%	35.4%	13.0%	9.1%	3.9%	100%	254	4.7%
14-15		9.6%	33.4%	31.1%	17.4%	5.5%	2.9%	100%	344	6.4%
16-19	1.7%	4.3%	30.9%	34.1%	16.8%	8.5%	3.7%	100%	352	6.5%
20-25	.9%	7.7%	29.8%	32.0%	14.7%	10.4%	4.5%	100%	685	12.8%
Over 25	.6%	4.9%	29.2%	28.8%	16.7%	9.2%	10.5%	100%	<u>617</u>	<u>11.5%</u>
% Total Full-Time RNs in Salary Range	.97%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%	100%	5371	100. %

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Table 1.12

Percentage of Full-Time Employed Licensed Practical Nurses With Various Numbers of Years in Practice, by 1974 Monthly Salary Range

Years in Practice	Full-Time Monthly Salary Range							Total % With Year's Practice	Total # With Year's Practice	% Total Full-Time LPNs With Given Year's Practice
	\$0-299	\$300- 499	\$500- 699	\$700- 899	\$900- 1099	\$1100- 1299	\$1300 up			
1	8.3%	72.8%	17.7%	.3%	%	.3%	.6%	100%	350	17.7%
2	5.5%	66.3%	27.1%	1.0%				100%	288	14.6%
3	4.1%	63.1%	32.4%				.4%	100%	244	12.3%
4	1.0%	59.6%	35.4%	4.0%				100%	198	10.0%
5	.9%	55.9%	40.3%	2.8%				100%	211	10.6%
6-7	2.8%	41.6%	51.0%	3.7%	.8%			100%	243	12.3%
8-9	1.3%	34.0%	56.6%	6.6%	.6%		.6%	100%	150	7.6%
10-11	6.1%	32.6%	52.0%	9.2%				100%	98	5.0%
12-13	1.6%	27.0%	63.5%	6.3%	1.5%			100%	63	3.2%
14-15		36.4%	50.0%	13.6%				100%	44	2.2%
16-19		20.0%	75.0%	5.0%				100%	20	1.0%
20-25	4.8%	30.6%	56.5%	8.1%				100%	62	3.0%
Over 25	10.0%	20.0%	70.0%					100%	<u>10</u>	<u>.5%</u>
% Total Full-Time LPNs in Salary Range	3.9%	54.5%	38.1%	3.1%	.2%		.2%	100%	1981	100. %

Table 1.13

Percentage of Full-Time Employed Registered Nurses in Various Fields of Employment, by 1974 Monthly Salary Range

Field of Employment	Full-Time Monthly Salary Range							Total % in Field	Total # RNs in Field	% Total Full-Time RNs in Field
	\$0-299	\$300- 499	\$500- 699	\$700- 899	\$900- 1099	\$1100- 1299	\$1300 up			
Hospital	.5%	7.8%	36.7%	36.2%	11.0%	4.8%	2.8%	100%	3390	63.1%
Nursing Home	2.2%	11.9%	48.0%	28.0%	6.6%	2.7%	.3%	100%	360	6.7%
School of Nursing	.4%	1.9%	13.2%	33.5%	28.6%	14.3%	8.2%	100%	266	5.0%
Private Duty	10	6.6%	43.3%	16.6%	13.3%	6.6%	3.3%	100%	30	.6%
Public Health	1.6%	1.6%	19.3%	53.5%	11.8%	10.2%	2.1%	100%	187	3.5%
School Nurse	.3%	13.0%	57.9%	20.3%	4.3%	3.3%	.7%	100%	276	5.1%
Industrial		2.5%	27.5%	50.8%	16.6%	2.5%		100%	120	2.2%
Office	2.3%	17.2%	59.2%	17.6%	2.5%	.5%	.7%	100%	436	8.1%
Other	2.6%	1.6%	21.0%	33.7%	20.6%	8.5%	11.8%	100%	305	5.7%
% Total Full-Time RNs in Salary Range	.97%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%	100%	5370	100. %

Table 1.14

Percentage of Full-Time Employed Licensed Practical Nurses in Various Fields of Employment, by 1974 Monthly Salary Range

Field of Employment	Full-Time Monthly Salary Range							Total % in Field	Total # LPNs in Field	% Total Full-Time LPNs in Field
	\$0-299	\$300-499	\$500-699	\$700-899	\$900-1099	\$1100-1299	\$1300 up			
Hospital	2.7%	54.7%	39.4%	3.1%	%	%	%	100%	1222	61.7%
Nursing Home	8.2%	58.3%	30.4%	1.8%			.7%	100%	427	21.6%
Private Duty	17.6%	17.6%	47.0%	17.6%				100%	17	.8%
Public Health		20.0%	70.0%	10.0%				100%	10	.5%
Industrial		33.3%	33.3%	25	8.0%			100%	12	.6%
Office	3.5%	57.5%	37.0%	1.5%	.5%			100%	200	10.1%
Other	1.0%	38.8%	52.2%	6.6%	1.0%			100%	90	4.5%
% Total Full-Time LPNs in Salary Range	3.9%	54.4%	38.1%	.2%			.2%	100%	1978	100. %

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Source: Commission Survey, 97% of the full-time employees in the sample responded.

Table 1.15

Percentage of Full-Time Employed Registered Nurses in Various Types of Positions, by 1974 Monthly Salary Range

Type of Position	Full-Time Monthly Salary Range							Total % in Position	Total # RNs in Field	% Total Full-Time RNs in Field
	\$0-299	\$300- 499	\$500- 699	\$700- 899	\$900- 1099	\$1100- 1299	\$1300 up			
Administrator	.7%	3.5%	12.9%	28.3%	22.7%	14. %	17.8%	100%	286	5.3%
Consultant	3. %	6. %	17.0%	24.6%	26.1%	15.4%	7.6%	100%	65	1.2%
Supervisor	.6%	4.4%	31.6%	38.3%	15.5%	5.8%	3.8%	100%	660	12.3%
Instructor	.9%	1.8%	15.3%	36.9%	27.2%	12.5%	5.3%	100%	320	5.9%
Head Nurse	.7%	6.4%	35.6%	37.0%	15.5%	4.3%	.5%	100%	717	13.4%
General Staff Duty	.8%	10.5%	45.6%	33.6%	5.9%	2.9%	.5%	100%	2593	48.3%
Other	1.8%	9.7%	37.1%	29.5%	9.7%	5.4%	6.8%	100%	<u>722</u>	<u>13.5%</u>
% Total Full-Time RNs in Salary Range	.97%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%	100%	5363	100. %

Table 1.16

Percentage of Full-Time Employed Registered Nurses in Various Clinical Areas, by 1974 Monthly Salary Range

Clinical Area	Full-Time Monthly Salary Range							Total % in Area	Total # RNs in Area	% Total Full-Time RNs in Area
	\$0-299	\$300- 499	\$500- 699	\$700- 899	\$900- 1099	\$1100- 1299	\$1300 up			
Geriatrics	1.7%	9.6%	41.1%	33. %	9.8%	3.8%	.7%	100%	527	9.8%
Gyn/OB	.9%	9.7%	40.0%	36.1%	9.0%	2.9%	1.4%	100%	410	7.7%
Medical/Surgical	.7%	7.9%	37.6%	34.4%	12.0%	4.8%	2.6%	100%	1717	32.1%
Pediatrics	1.8%	7.9%	32.1%	36.4%	13.9%	6.0%	1.8%	100%	330	6.2%
Psychiatric		4.6%	18.7%	36.0%	20.7%	14.2%	5.7%	100%	261	4.9%
Other	.7%	5.7%	35.8%	35.2%	11.7%	5.4%	5.3%	100%	1495	27.9%
General	1.6%	14.1%	47.5%	26.8%	5.4%	3.3%	1.3%	100%	<u>611</u>	<u>11.4%</u>
% Total Full-Time RNs in Salary Range	.97%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%	100%	5351	100. %

Footnotes, Chapter One

- 1 Practice of Nursing, Code of Iowa, Section 152.3.
- 2 Ibid.
- 3 Practice of Nursing, Code of Iowa, Section 152.1.
- 4 Office for Planning and Programming, Iowa Health Manpower Plan, 1975, (Des Moines: 1975).
- 5 Lynne M. Illes, R.N., Executive Director, Iowa Board of Nursing, telephone interview, June, 1975.
- 6 Jerome P. Lysaught, An Abstract For Action, National Commission for the Study of Nursing and Nursing Education, (New York: McGraw-Hill, 1970), p. 56 ff.
- 7 Jerome P. Lysaught, An Abstract for Action: Appendices, National Commission for the Study of Nursing and Nursing Education, (New York: McGraw-Hill, 1971), pp. 373-381.

Chapter Two

PREPARATORY EDUCATION

Nursing educational programs are responsible for preparing nurses to deliver high quality health care. This chapter--an overview of Iowa preparatory nursing programs--treats geographic distribution, student capacity, plans for expansion, and student attrition. In addition, four types of educational programs are compared in regard to faculty characteristics, student high school records, and types of practice in which graduates are engaged. Efforts to ease articulation problems are also discussed. Finally, the urgent need to change nursing practice in accordance with changes in education is emphasized.

Iowa Nurse Graduate Examination Rankings

Any discussion of nursing education should be prefaced by the fact that graduates from Iowa nursing programs, compared to graduates across the nation, rank very high on the State Board Test Pool Examination required for licensure. This fact is obtained: (1) when comparing scores and (2) when comparing by state, percentages of people in all states who pass the examination at the first attempt.

The examination written by RN candidates is divided into five topical sections. For each section of the RN examination Table 2.1 shows Iowa's national ranking by score achieved. The examination written by LPN candidates is divided into two sections (Part I and Part II) however, only one score is given and the national ranking shown on Table 2.1 is based on this one score achieved.

Table 2.2 presents mean scores achieved by RN candidates on the 1972-73 examinations both nationally and in Iowa. Iowa scores are also shown according to the type of nursing program from which candidates graduated.

Iowa candidates from all types of nursing programs achieved mean scores well above the national mean, and far above the "passing" score of 350.

Iowa's national rank is also high when calculated by the percentage of candidates who meet or exceed the standard scores. Iowa's RN candidates ranked 7th in the nation in 1972-73; LPN candidates ranked 8th.

Table 2.1

Iowa's National Ranking on State Board Test Pool Examinations
by Score Achieved, by Subject Sections for
Registered Nurses and for Licensed Practical Nurses

	Registered Nurse					Practical Nurse
	Medical	Surgical	Obstetric	Pediatric	Psychiatric	
1964	3	1	5	2	7	10
1965-66	13	11	11	15	14	20
1966-67	14	8	11	11	8	22
1967-68	8	8	22	18	24	13
1968-69	5	4	8	2	8	4
1969-70	3	2	3	2	8	2
1970-71	2	2	10	2	4	5
1971-72	2	2	2	2	4	5
1972-73	2	1	1	1	2	8
1973-74	4	4	5	5	6	17

Source: Iowa Board of Nursing, from National League for Nursing Statistics

Table 2.2

National and Iowa Mean Scores,
1972-73 State Board Test Pool Examination,
Registered Nurse Candidates, by
Subject Sections, and Iowa Scores
by Type of Nursing Program

Type of Program	Mean Standard Scores				
	Med	Srg	Obs	Nch	Psy
Degr	562.4	559.5	567.6	573.0	577.2
Dipl	557.0	578.4	548.4	565.2	555.2
AD	537.4	549.4	537.6	543.1	534.7
U. S. Mean Score All Programs	516.2	516.9	511.9	517.2	511.9
Iowa Mean Score All Programs	554.8	570.0	550.3	563.0	556.0

Legend:

Degr - Degree Programs, Iowa
Dipl - Diploma Programs, Iowa
AD - Associate Degree Programs, Iowa
Med - Medical
Srg - Surgical
Obs - Obstetrics
Nch - Nursing of Children
Psy - Psychiatric Nursing

Note: Score of 350 is passing

Source: Iowa Board of Nursing, from National League for Nursing Statistics

Methodology

The data for this chapter was obtained primarily through questionnaires. One source was the Commission's survey of Iowa nurses, described in the previous chapter, which provided information about basic education and about the highest degrees held by nurses applying for licensure in 1974.

The Iowa Board of Nursing requires annual reports from each nursing program. The Commission's study contains information from the reports assumed to be current as of October 1974. These reports (referred to as Annual Reports to Iowa Board of Nursing) were useful in establishing the numbers and academic preparation of faculty members by program; the number of students withdrawing from the program; and the reasons given by students for withdrawal. Raw numbers of withdrawals were not reliable, because some programs counted withdrawals during an entire calendar year while others appeared to count only those who enrolled in 1974 and withdrew by the report filing date. Other information--such as enrollment, graduations over a five-year period, and attrition--was somewhat unreliable because programs appeared to be using a variety of cut-off dates in their calculations.

For information, the Commission contacted programs directly. Alumna studies were requested but the responses varied in format, prohibiting tabulation.

Questionnaires were sent to all administrators of nursing programs (Appendix B). Enclosed were questionnaires for distribution to faculty members (Appendix C). The questionnaire to administrators addressed faculty-student ratios, student capacity, expansion plans, and one aspect of articulation. Faculty questionnaires sought information about years of teaching experience, courses completed in education departments relative to teaching methods, and distribution of faculty time among various functions. The return rate for administration questionnaires was 75% for baccalaureate programs, 80% for diploma schools, and 100% for associate degree programs. In seven cases, reports were merged for practical and associate degree programs. Either merged or single replies were received from 62.5% of the practical nurse programs. In the faculty survey, slightly over half of the faculty members replied. (100 associate degree, 97 diploma, 104 baccalaureate, and 53 practical nursing faculty members) Returns, then, were large enough to be valid statistically.

Geographic Distribution of Nursing Programs

Graduates of three types of nursing programs--associate degree, diploma and baccalaureate--take the same examination in order to qualify for licensure to practice nursing using the title "Registered Nurse."

In Iowa 14 associate degree programs 22 months long, are offered in 11 community colleges and vocational/technical institutes (hereinafter referred to as area schools).

The ten diploma programs are administered by hospitals, and average 29.3 months in length. At the time this survey was completed, nine diploma programs reported to the Iowa Board of Nursing. Two of these programs were 33 months long, three were 30 months, and four were 27 months.

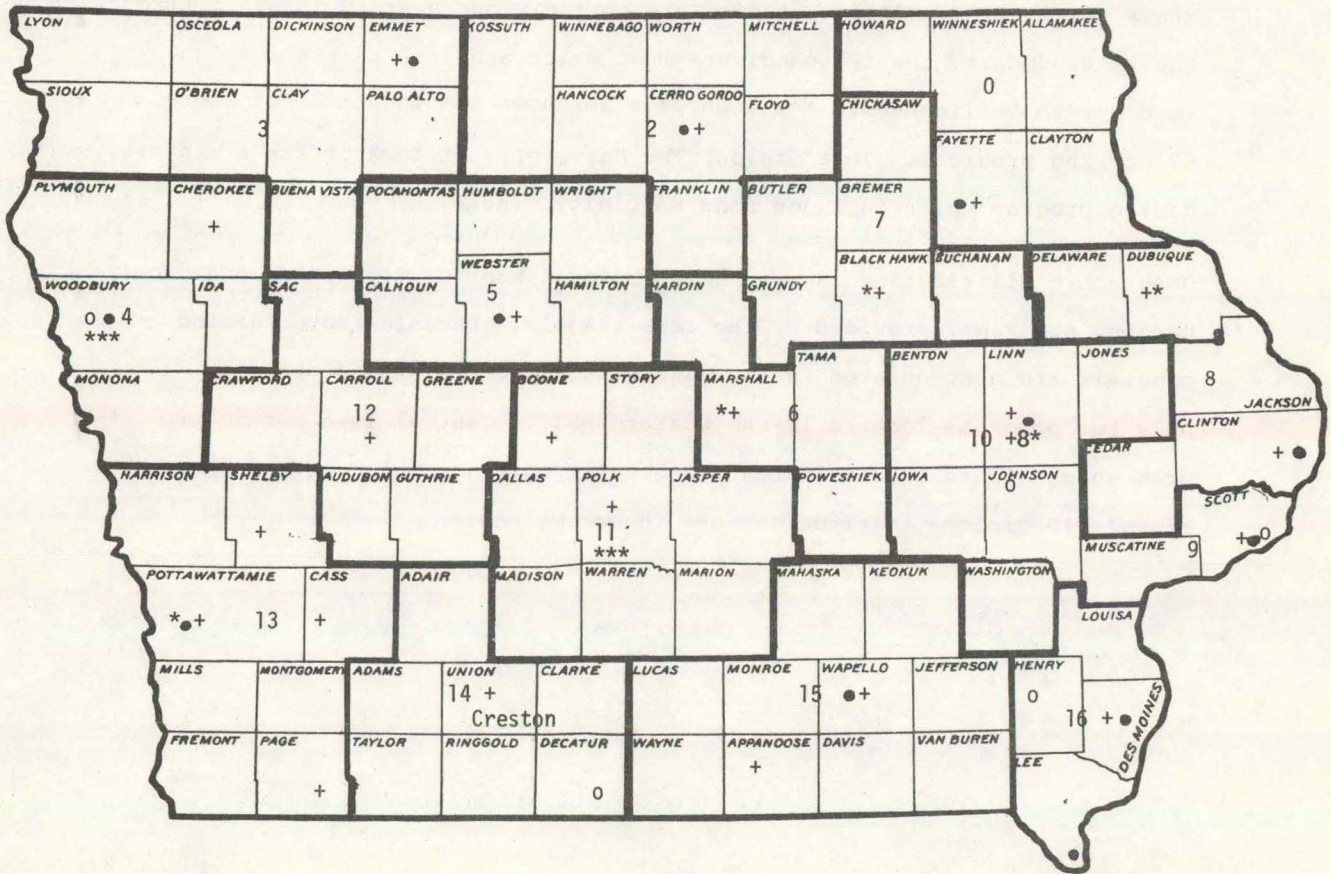
Six four-year Iowa colleges and universities now grant baccalaureate degrees in nursing; two more are newly approved by the Iowa Board of Nursing and will be fully operational in three to four years. In these

programs general liberal arts and prenursing courses are followed by nursing courses. The ratio of nursing content to liberal arts content varies among baccalaureate programs.

Practical nursing is offered in 25 programs, taught in 14 area schools and their satellite campuses, in one hospital and in one high school (the high school program is excluded from this study). The nursing programs which the Commission studied are commonly one year in length. Like the RN candidate, the LPN candidate must write and pass an examination in order to be licensed. Map 1 on page 28 shows the locations of these 57 nursing programs. In addition, The University of Iowa offers a masters degree program which includes four specialty tracks.

Geographic distribution is most uniform for associate degree and practical nursing programs, provided by the area schools. Baccalaureate nursing programs are concentrated in the east central part of the state with only two programs located in the western half. Central Iowa has no program which offers a baccalaureate degree in nursing, but 3 out of the state's 10 diploma institutions are in Des Moines.

Location of Nursing Programs



Map 1

- O Baccalaureate
- * Diploma
- Associate Degree
- + Practical Nursing

Trends in Numbers of Nursing Programs and Graduates

Nationally, a marked increase in associate degree programs and graduates has occurred in recent years--accompanied by a decrease in diploma programs and graduates. To illustrate this change, in 1954 90.4% of the nation's nursing graduates were from diploma schools.¹ Over the next 9 years, this proportion remained relatively stable. In 1962-63, diploma graduates accounted for 81.6% of the nation's total nursing graduates² (down 8.8% from 1954). Over the next ten years, the proportion of diploma to total graduates decreased markedly to approximately 42% in 1971-72.³ The increase in associate degree nurses counter-balanced this. In 1954, 1.2% of the nation's nursing graduates were from associate degree programs. This percentage increased to 4.6% by 1962-63, and it skyrocketed to 37% in 1971-72.⁴

In Iowa, a similar trend is now obvious. In 1968 only two associate degree programs existed in Iowa.⁵ By 1971-72 five programs accounted for 24% of the admissions and 13% of the nursing graduates in the state.⁶ In 1974, 12 associate degree programs graduated 265 students, accounting for approximately 27% of the state's graduating nurses.⁷ Two more associate degree programs were in operation in 1974 but had not yet graduated students.

Iowa diploma programs have decreased in number from 22 in 1963 to 10 in 1974. Ninety-six fewer students were admitted but only two fewer were graduated in 1971-72 than in 1962-63. (See Tables 2.3 and 2.4). Of the nine diploma programs filing annual reports in time for inclusion in the present study, one program graduated three fewer students in 1974 than in 1970; all others graduated more students in 1974.⁸ The number of graduates from diploma programs has remained steady to date. This fact indicates larger enrollments in those programs which continue to exist.

Table 2.3

Students Graduated in Iowa and Nationally, from Initial Registered Nurse Programs, Academic Years 1962-63 and 1971-72, by Type of Nursing Program

	Total Number	Number	Diploma Percent	Number	Associate Percent	Number	Baccalaureate Percent
1954 National	28,539	25,797	90.4%	-	1.2%	2,352	8.2%
1962-63 National	32,393	26,438	81.6%	1,479	4.6%	4,481	13.8%
Iowa	679	619	89%	-	-	78	11%
1971-72 National	51,304	21,410	42%	18,926	37%	10,968	21%
Iowa	911	617	68%	116	13%	178	20%

Sources: ANA, Facts About Nursing. 1955-56 ed. p. 80.
 ANA, Facts About Nursing. 1965 ed. p. 87.
 ANA, Facts About Nursing. 1972-73 ed. p. 80.

Table 2.4

Students Admitted in Iowa and Nationally, to Initial Registered Nurse Programs, Academic Years 1962-63 and 1971-72, by Type of Nursing Program

	Total Number	Number	Diploma Percent of Total	Number	Associate Percent of Total	Number	Baccalaureate Percent of Total
1962-63 National	49,521	36,434	74%	3,490	7%	9,597	19%
Iowa	916	763	83%	25	3%	128	14%
1971-72 National	94,154	29,801	32%	36,996	40%	27,357	29%
Iowa	1,346	667	50%	323	24%	356	26%

Sources: ANA Facts About Nursing. 1965 ed. p. 85.
 ANA Facts About Nursing. 1972-73 Kansas City; 1974 p. 75.

Meanwhile, 232 more RN students graduated in 1972 than in 1963. Associate degree and baccalaureate programs have accounted for all of this increase. Iowa is following the national trend in that its diploma graduates are remaining constant in numbers, but declining in percentage of total graduates.

Consistent with these figures, baccalaureate programs (see Table 2.3) have been increasing in number, and are graduating an increasing percentage of the state's nursing graduates. In 1962-63 two programs graduated 11% of Iowa nurses and in 1972 five programs graduated 20%. By 1974, a total of eight programs had been approved by the Iowa Board of Nursing. One approved program had not yet begun to admit students, and two had yet to graduate a class. Also in operation was a program designed for RN's graduating from National League for Nursing accredited diploma programs since 1960 who are seeking baccalaureate degrees in nursing.

In 1972, Iowa closely matched the national average for the percentage of nursing students graduating from baccalaureate programs (20% and 21%, respectively). Iowa's three additional programs not yet in full operation provide the potential for maintaining or possibly increasing that percentage.

Great increases in the number of graduates from practical nursing programs are also apparent. Iowa programs graduated 262 students in the 1962-63 academic year,⁹ and 855 in 1972.¹⁰ Since candidates must complete the coursework in a nursing program before writing the licensure examination, this trend is apparent in examination statistics. According to the Iowa Board of Nursing Annual Reports of the Executive Director, 988 RN and 935 LPN candidates passed the examination during the fiscal year 1974 as compared to approximately 700 RN and 350 LPN candidates passing the examination in the fiscal year 1965. The increase of LPNs relative to RNs prepared is obvious.

Student Capacity

In an attempt to assess the extent to which present nursing programs are able to accommodate applicants, the Commission (see Appendix B) asked administrators: "How many applications for admission did you have to reject in 1974 because they could not be accommodated by your present size facility and faculty?" Some programs which reported the use of waiting lists did not answer this question. Administrators were also asked: "Without changing your present clinical and classroom facilities or

faculty, how many more students could you admit into your program in five years? (If you are operating at full capacity now, please enter zero.)"

The most striking result was that six baccalaureate nursing programs reported that no students had been turned away. (One school did not answer the question and one indicated that admission policies will change soon). Furthermore, three programs are not yet in full operation, and three more indicated that they could accommodate, among them, a total of 40 more students per year. These results suggest that baccalaureate programs may have adequate, if not excess, capacity at this time.

Associate degree programs showed the greatest excess of applicants over capacity. Of the 14 programs, only the four most recently approved reported the ability to accommodate more students. Among those four programs, 50 more students could be absorbed. At some institutions, on the other hand, many applicants are rejected due to lack of capacity. While two programs reported no rejection of applicants, three reported that they rejected 25 students, and four reported that they rejected 50 to 60. One program located in an area where there are no other nursing programs within a considerable distance, reported that it rejected 125 applicants. Even when this extreme case was excluded from the statistics, the overall average for associate degree programs was 29 rejections per program. (One caution in interpreting this data, as noted in the methodology section, is that some associate degree programs combined their practical and associate degree nursing reports). Expansion to accommodate more students is apparently warranted in view of the number of applicants being rejected for their lack of space and the fact that these programs have the most even geographic distribution.

At the extremes among diploma programs, two reported that no applications had been rejected due to lack of space; one reported that 80 students were rejected. Omitting these extremes, the average was 11 rejections per program. Though the rejection rate was low, the diploma programs appear to be operating at full capacity. Only one program indicated

the ability to accommodate 10 more students without changing present facilities.

Programs in practical nursing averaged 17.5 more applicants than space and faculty could accommodate. One program which reported no rejections estimated that an additional class of 30-35 students could be admitted now, if Department of Public Instruction and Iowa Board of Nursing regulations were less restrictive.

Associate degree and practical nursing programs seem most likely to have more applicants than can be accommodated. Diploma programs appear to have the least capacity to accommodate more students without expanding; however, their low rejection rate suggests that the number of applicants and openings are stable and fairly well matched. By the three measures set forth above--no reported rejections, current ability to accommodate more students, and new programs not yet graduating students--baccalaureate programs appear to need expansion least.

1980 Projection of Student Capacity

Administrators of nursing programs were asked: "Taking into account any changes you are planning in your program and any trends you perceive in student applications, what is the total number of students you actually expect to be accommodating in 1980?" These estimates were compared to enrollment statistics for 1974 reported by the programs to the Iowa Board of Nursing. Overall, a 12.4% increase in nursing students was predicted. By type of program, the predictors were: a 21.5% increase in baccalaureate students (excluding one program not yet in operation), a 33.2% increase in associate degree students, a 14.5% decline in diploma students (one program reported that it plans to close before 1980), and a 15.9% increase in practical nursing students. It is important to remember, as noted in the methodology section of this chapter, that this information is not complete, particularly for practical nursing programs.

Faculty and facility expansion already planned by programs would allow, by 1980, an increase of 15 practical and 115 registered nursing students. Lack of clinical facilities was cited by 75% of the reporting programs as a factor to expansion plans. About one third cited difficulty in attracting and/or financing faculty. Regulations of Iowa Board of Nursing and the Iowa Department of Public Instruction were cited as a limiting factor by 18% of the programs. Clinical facilities crucial to nursing programs are limited, and it is, of course, beyond the power of nursing to increase that supply. Innovative methods to maximize utilization, through rescheduling, etc., must be found.

Attrition

In addition to considering the capacity of education programs to accommodate students, it is appropriate to compare the numbers of students admitted to the numbers actually graduated. Attrition rate, defined as the percentage of students who enroll in nursing programs but do not graduate, can be interpreted in a number of ways. It is sometimes used as an indicator of the economic efficiency of the program. When a society subsidizes nursing education, it assumes that the investment will be recovered when the graduates practice. Students who do not graduate, or do not practice, do not "repay" the investors. The attrition rate simply indicates that a program admits students whom it does not retain for one reason or another--factors within the program which cause students to lose interest; inadequate screening processes which fail to predict commitment and ability; unpredictable personal problems of students. To the extent that a high attrition rate is due to students' academic failure, it may indicate that a program has unusually high academic standards, inadequate admission screening, or teaching methods inappropriate to some students' needs.

Both nationally and in Iowa, the lowest attrition rate is in diploma programs. Between 1961 and 1970, the national average attrition rate for diploma programs was 29.6%, for baccalaureate 40%, and for associate

degree programs 43.2%. During this time there was a trend toward decline in attrition rates in all types of programs. In 1970 the attrition rate nationally was about 33%.

Table 2.5

National Attrition Rates, By Type of Nursing Program, 1961-70

Year	Diploma	Baccalaureate	Associate Degree
1961	33%	41%	43%
1962	36%	41%	44%
1963	32%	41%	41%
1964	26%	42%	44%
1965	26%	41%	44%
1966	31%	43%	46%
1967	31%	40%	46%
1968	28%	40%	45%
1969	25%	36%	41%
1970	28%	35%	38%
Average	29.6%	40%	43.2%

Source: Compiled from American Nurses' Association, "Nursing Education Admissions and Graduation Statistics", Facts About Nursing, (New York and Kansas City: American Nursing Association, various years), paging varies.

Attrition in Iowa

Iowa nursing programs file attrition rates annually with the Iowa Board of Nursing. Several programs appeared to be calculated by following one group of students from admission through graduation and reporting the percentage of the students admitted in a given year who did not graduate with their class. The 1970-74 attrition rates for the 34 nursing programs who apparently use this longitudinal method over at least four years, are presented on Tables 2.6 and 2.7.

By this measure the three baccalaureate programs apparently retain the largest percentages of students and also show a downward trend in attrition.

The four reporting associate degree programs all have experienced declining attrition rates. (This must be interpreted with caution since the reporting programs include only 37% of the total associate degree

students in Iowa.) Diploma programs were evenly divided, with half showing a declining rate.

Using 1970-1974 average percentage changes by program, attrition rates have risen slightly for diploma and practical nursing programs (1.3% and 7.5% respectively) but have declined for baccalaureate and associate degree programs (20% and 3.9% respectively). For all types of programs, large variations are present among institutions. Some consistently show relatively low attrition rates, some show high rates, and others fluctuating rates.

Table 2.6

Attrition Rates in Percentages, 1970-74, for Selected^a
Individual Institutions in Iowa Preparing Registered
Nurse Candidates, by Type of Nursing Program

		BACCALAUREATE ^b							
Individual Institutions:		A	B	C	Average				
Year									
1970		29%	N.A.	29%	29%				
1971		24%	7%	21%	17%				
1972		7%	0	22%	10%				
1973		8%	9%	12%	10%				
1974		19%	2%	7%	9%				

		DIPLOMA ^c								
Individual Institutions:		A	B	C	D	E	F	G	H	Average
Year										
1970		20%	8%	0	19%	45%	33%	0	28%	19.1%
1971		20%	31%	14%	24%	33%	15%	15%	33%	20 %
1972		18%	17%	10%	21%	38%	N.A.	10%	24%	19.7%
1973		29%	13%	6%	12%	25%	27%	18%	31%	20.1%
1974		28%	19%	6%	16%	36%	19%	21%	18%	20.4%

		ASSOCIATE DEGREE ^d				
Individual Institutions:		A	B	C	D	Average
Year						
1970		46%	13%	27%	N.A.	28.6%
1971		30%	15%	25%	40%	27.5%
1972		42%	10%	24%	14%	22.5%
1973		15%	10%	19%	34%	19.5%
1974		27%	13%	8%	35%	20.1%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

^a See text for criteria used for selection.

^b These three programs reporting include 70% of the students enrolled in baccalaureate programs in Iowa in 1974.

^c These eight programs reporting include 85% of the students enrolled in diploma programs in Iowa in 1974.

^d Programs reporting include 37% of the students enrolled in associate degree programs in Iowa in 1974.

Table 2.7

Attrition Rates in Percentages, 1970-74, for Selected^a
Individual Institutions in Iowa Preparing
Licensed Practical Nurse Candidates

Individual Institutions:	1970	1971	1972	1973	1974
A	16%	12%	10%	16%	N.A.
B	13%	12%	40%	22%	23%
C	0	14%	21%	20%	17%
D	5%	5%	0	0	7%
E	15%	10%	0	10%	0
F	5%	2%	7%	3%	N.A.
G	0	18%	32%	24%	32%
H	20%	7%	7%	6%	16%
I	4%	4%	6%	12%	12%
J	23%	6%	9%	5%	45%
K	18%	0	9%	24%	N.A.
L	15%	15%	15%	0	0
M	N.A.	N.A.	N.A.	23%	5%
N	19%	33%	38%	36%	36%
O	0	4%	15%	0	13%
P	0	17%	17%	4%	10%
Q	N.A.	20%	15%	26%	20%
R	N.A.	13%	18%	22%	28%
S	9%	0	8%	6%	8%
Average	9.25%	10.6%	14.8%	13.6%	17.0%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

^a These nineteen programs reporting include 69% of the students enrolled in practical nursing programs in Iowa in 1974.

Reasons for Withdrawals

The 1974 annual reports to Iowa Board of Nursing include lists of students withdrawing from nursing programs during the year, and lists of reasons why the withdrawals occurred. Table 2.8 shows, by type of nursing program and by totals, the percentage of withdrawing students giving each reason.

Iowa information is contrary to the results of a 1970 national survey which found that academic failure accounted for less attrition than other, more voluntary, reasons.¹² When all types of Iowa nursing programs are

considered, by far the most frequently given reason for withdrawing (32% of all withdrawals) was lack of academic success. Associate degree programs showed the largest percentage (46%) of failure and practical nursing programs the smallest (27%). Though grades explained 32% of total withdrawals, "personal reasons" was the most frequent response in practical nursing programs, and "change in major" (55% of withdrawals) was by far the most frequent in baccalaureate programs. Associate degree programs and practical nursing programs reported that some students take advantage of the ladder concept to change programs of study in nursing. These students can hardly be considered withdrawals.

It should be noted that academic reasons, "grades" and "change in major" taken together account for 49% of the total withdrawals. Reasons often assumed to be typical of female students--such as marriage, pregnancy, and family--accounted for only 10%; even when the "personal" category is added, the total is only 22%.

Not all programs reported withdrawals. Furthermore, it is probable that in some cases the real reasons for leaving were not the reasons stated by the student. If attrition is due largely to academic reasons, more knowledge is needed before a solution can be found. Changes in major fields of study cannot be lightly dismissed on the grounds that "these people would not be committed nurses anyway." It is necessary first to know that these changes do not occur because of student misconceptions which cause nursing practice to appear unattractive in terms of salary, duties, employment choices, etc. A thorough overview of realistic expectations for nursing students should be presented early in the educational process, ideally before a student selects a program. Direct observation of practicing nurses should be included. If students decide against nursing on the basis of accurate information, they are probably saving time and money for all concerned. Factors which seem to make nursing unattractive must be investigated. This subject is more fully discussed in Chapter Four.

Financial barriers can be reduced by establishing scholarship and loan funds. While lack of financial resources accounted for only two percent of the reported withdrawals in Iowa, that factor may prevent others from undertaking their studies, or from continuing studies beyond the initial nursing program.

Nursing educators can probably do little to confront other reasons for withdrawal, such as health and personal problems. Non-academic and non-financial reasons are given by about 47% of the withdrawing students in programs preparing RN candidates and about 67% of the withdrawing students in programs preparing LPN candidates.

Table 2.8

1974 Iowa Students' Reasons Given for Withdrawing From Nursing Programs, by Type of Program

Reason	Practical	Associate Degree	Diploma	Bacca-laureate	Total RN Programs
Personal	36%	23%	13%	4%	12%
Marriage	-	8%	7%	-	5%
Pregnant	3%	-	3%	-	2%
Grades	27%	46%	31%	33%	32%
Health	19%	8%	9%	-	6%
Financial	3%	4%	-	2%	2%
Moved	-	-	-	-	.5%
Change in Major	2%	-	6%	55%	17%
Never Registered	-	-	4%	6%	4%
Leave of Absence	-	-	4%	-	2%
Transfer	1%	-	11%	-	7%
Lose Interest	2%	8%	5%	-	4%
Family	1%	-	4%	-	3%
Unknown	5%	-	2%	-	1%
Total Numbers of Withdrawals	145	26	114	49	

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

¹ National League for Nursing, "Let's Examine: Attrition Rates in Schools of Nursing," Nursing Outlook, XVIII, (September, 1970) 58.

Selected Characteristics of Nursing Programs

This section describes associate degree, diploma, and baccalaureate nursing programs, and, where information is available, practical nursing

programs. Such factors as faculty characteristics, student-faculty ratios, and employment patterns among graduates are examined. Unfortunately, information is not available to measure nursing programs by the most crucial criterion--competency of graduates and the extent to which competency is the direct result of education rather than individual ability.

Faculty Credentials

Although academic degrees and years of teaching experience are not necessarily accurate indicators of competency, faculty members in each type of program were nonetheless described by these factors. Faculty members in each type of nursing program were identified by highest degree held, as reported by programs to the Iowa Board of Nursing in 1974. Table 2.9 shows the percentage of total administrators and faculty members in each type of nursing program holding each type of degree earned. In Table 2.10, percentages of full-time administrators and faculty members by type of nursing program are given, as are national percentages for programs preparing RNs.

Table 2.9

Percentages of Total Iowa Administrators and Faculty Members^a by Type of Nursing Program, and Highest Degree Held^b, 1974

Type Nursing Program	FACULTY DEGREES			
	Registered Nurse ^c	Baccalaureate ^d	Masters ^d	Ph.D. ^d
Practical	60%	32%	6%	0
Associate Degree	42%	48%	7%	0
Diploma	34%	51%	15%	0
Baccalaureate	0	30%	60%	9%

Table 2.9

Percentages of Total Iowa Administrators and Faculty Members^a by Type of Nursing Program, and Highest Degree Held,^b 1974
(Continued)

Type Nursing Program	FACULTY DEGREES			
	Registered Nurse ^c	Baccalaureate ^d	Masters ^d	Ph.D. ^d
Baccalaureate ^e (Excluding Univ. of Iowa)	0	46%	46%	6%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

- ^a An effort was made to count only faculty teaching exclusively nursing courses; information was not always complete enough to make this possible.
^b All degree groupings included both faculty members with, and without, additional earned credit beyond the degree listed.
^c Some program reports indicated only that faculty members were RNs; the type of program in which training was received was omitted. These, plus all faculty from associate degree and diploma programs, are grouped in the "RN only" column.
^d The headings "Baccalaureate", "Masters" and "Ph.D." include both degrees in nursing and degrees in other fields.

Some faculty members teaching in practical and associate degree programs on the same campus may have been counted twice.

- ^e The University of Iowa was separated from other baccalaureate programs because it is large enough to distort state-wide statistics.

Table 2.10

Percentages of Full-Time Administrators and Faculty Members, by Type of Nursing Program and Highest Degree Held, in Iowa, 1974, and in the Nation, 1972

Type Nursing Program	FACULTY DEGREES			
	Registered Nurse	Baccalaureate	Masters	Ph.D.
Iowa Practical Nursing	58%	32%	9%	
Iowa Associate Degree	26%	64%	11%	0

Table 2.10

Percentages of Full-Time Administrators and Faculty Members, by Type of Nursing Program and Highest Degree Held, in Iowa, 1974, and in the Nation, 1972
(Continued)

Type Nursing Program	FACULTY DEGREES			
	Registered Nurse	Baccalaureate	Masters	Ph.D.
Iowa Diploma	35%	52%	11.6%	.2%
Iowa Baccalaureate		25%	65%	10%
Iowa Baccalaureate (Excluding Univ. of Iowa)		40%	51%	10%
National Practical Nursing	-	-	-	-
National ^a Associate Degree	2.4%	39%	57.9%	.7%
National ^a Diploma	19.5%	59.9%	20%	.1%
National ^a Baccalaureate		10.7%	81.9%	7.4%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

American Nurses' Association, Facts About Nursing 1972-73, (Kansas City: A.N.A. 1974), p. 43.

^a National statistics are based on 1972 data; Iowa statistics are for 1974.

All faculty in baccalaureate programs are required to have baccalaureate degrees or higher.¹³ (Holders of master's degrees are concentrated in baccalaureate programs). In practical, associate degree, and diploma nursing programs, nurses with less than a baccalaureate degree composed 58%, 26%, and 35% respectively of the full-time faculty. Baccalaureate programs had 10% Ph.D.'s, while in diploma programs .2% (one non-nurse administrator) held such a degree. There are no Ph.D.'s in the other programs.

In regard to the percentage of full-time faculty members holding each type of degree, Iowa's deviation from the national average is striking. A much smaller percentage of Iowa nursing faculty have degrees. Statistics show that graduates of Iowa programs have consistently ranked high on the National State Board Test Pool Examination.

In associate degree nursing programs, forty-seven percent fewer master degrees are held by Iowa full-time faculty members than by associate degree faculty nation-wide. Iowa has 23.6% more faculty with less than a baccalaureate degree and 25% more with only a baccalaureate degree. Iowa baccalaureate programs have 17% fewer holders of masters degrees, and 14% more faculty with only baccalaureates. However, Iowa has 2.6% more Ph.D.'s in its nursing programs than the national average. The University of Iowa has attracted a large share of Iowa faculty holding higher degrees. When that program is excluded, Iowa has about 30% fewer master's degrees and 30% more faculty with only a baccalaureate degree, than the national average. Diploma programs more closely approach the national average, employing 7.9% more baccalaureate and 8.4% fewer masters holders than the national average. Nevertheless, the pattern of the lower-than-average educational achievement level among faculty members is evident.

Tables 2.10 and 2.11 show more specifically the types of degrees held and the percentage of faculty who have earned credits toward a higher degree. The National League for Nursing Criteria for Evaluation states

that faculty members in practical nursing programs should have at least a baccalaureate degree plus nursing experience.¹⁴ For nursing programs preparing RN candidates, master's degrees are recommended for all faculty, though a baccalaureate is accepted in associate degree programs if there is supervision from holders of master's degrees.¹⁵ Diploma faculty may work toward a master's while teaching.¹⁶ Faculty in baccalaureate programs should have graduate preparation.¹⁷ Large percentages of Iowa faculty do not meet these criteria; since accreditation by the National League for Nursing is voluntary, many Iowa programs do not seek accreditation.

The Commission's Advisory Committee on Preparatory Education recognized the shortage of faculty members with higher degrees and the problem of acquiring and retaining faculty with graduate level preparation. The Committee's recommendations included:

1. Increasing the options as well as the localities for baccalaureate and graduate education; i.e., extension centers, private colleges and a variety of program designs;
2. Urging the State to provide incentives for nurse educators to earn graduate degrees and incentive to remain in or return to nursing institutions;
3. Urging educational institutions to explore alternative patterns for the employment of graduate level faculty; i.e., joint teaching-practice-research assignments.

Table 2.11

Percentage of Full and Part-Time Iowa Faculty Employed
in each Type of Nursing Program, by
Highest Degree Held

Faculty Education Level	Type of Nursing Program				
	Practical ^c	Associate Degree ^d	Diploma ^e	Bacca- laureate	Bacc. excluding Univ. of Iowa
LPN	1%				
Associate Degree	.7%	.7%			
Associate Degree + ^a	0				
Diploma	23%	25%	10%		
Diploma +	10%	2%	7%		
Unspecified RN	17%	9%	6%		
Unspecified RN +	8%	5%	11%		
Bachelor Degree, Nursing ^b	26%	36%	24%	26%	41%
Bachelor Degree, Nursing +	2%	-	8%	3%	5%
Bachelor, other field	2%	10%	17%	1%	-
Bachelor Nursing Education	2%	2%	2%	-	-
Master, Nursing	4%	2%	.5%	10%	8%
Master, Nursing Education ^b	0	-	1%	3%	7%
Master, other field	2%	5%	9%	47%	31%
Ph.D., Nursing ^b	0	-	-	1%	3%
Ph.D., other field	0	-	1%	8%	3%
No degree	0	-	1%	-	-
Total	100%	100%	100%	100%	100%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

^a The + symbol indicates additional hours of earned credit toward the next higher degree.

^b Includes only degrees specified to be in the field of nursing.

^c Two practical nursing programs did not file this information.

^d One associate degree program did not file this information.

^e One diploma program did not file this information.

Table 2.12

Percentage of Full-Time Iowa Faculty and Administrators
Employed in Each Type of Nursing Program,
by Highest Degree Held

Faculty Education Level	Type of Nursing Program				
	Practical	Associate Degree	Diploma	Bacca- laureate	Bacc. excluding Univ. of Iowa
LPN					
Associate Degree					
Associate Degree + ^a					
Diploma	22%	15%	10%		
Diploma +	14%	3%	5%		
Unspecified RN	14%	5%	6%		
Unspecified RN +	8%	3%	14%		
Bachelor Degree, Nursing ^b	25%	46%	22%	21%	33%
Bachelor Degree, nursing	3%	-	10%	2%	7%
Bachelor, other field	2%	15%	18%	2%	-
Bachelor, Nursing Education	2%	3%	2%	-	-
Master, Nursing	6%	3%	.6%	11%	7%
Master, Nursing Education ^b	-	-	1%	3%	9%
Master, other field	3%	8%	10%	51%	35%
Ph.D., Nursing ^b	-	-	-	-	5%
Ph.D., other field	-	-	.6%	10%	5%
No degree	-	-	1%	-	-
Total	100%	100%	100%	100%	100%

Source: Iowa Board of Nursing, Annual Reports from Nursing Programs in Iowa, unpublished, 1974.

^a The + symbol indicates additional hours of credit earned toward the next higher degree.

^b Includes only degrees specified to be in the field of nursing.

The questionnaire (Appendix C) returned to the Commission by faculty members indicated the widespread appeal of joint assignments, which include time for research, practice of nursing not related to teaching, and administrative duties, as well as teaching. (89% of the faculty in baccalaureate programs indicated that a joint assignment would appeal to them; in the other three types of programs, 70-74% of the faculty responded in favor of such assignments.)

The number of years of experience in teaching nursing is another possible indicator of faculty qualification. Faculty members responding to the Commission questionnaire were asked how many years of experience they had in teaching nursing, and how many years they had taught at the institution where they are currently employed. Responses are shown on Table 2.13.

Faculties in diploma programs showed the most teaching experience. When years of experience are compared with years at the present place of employment, diploma teachers clearly tend to remain at one institution, that is, they tend not to be recruits from other nursing faculties.

Practical nursing and associate degree faculties ranked second and third, both in years of experience and length of tenure, (The University of Iowa was excluded from baccalaureate statistics.)

Obviously, the length of time programs have been in operation is relevant. Diploma programs and The University of Iowa program have more experienced faculties, but they also have existed longer than the area schools (associate degree and practical nursing programs) and other baccalaureate programs.

Table 2.13

Average Years of Experience in Teaching Nursing, Iowa Faculty,
by Type of Nursing Program

	Type of Nursing Program				
	Practical	Associate Degree	Diploma	Bacca- laureate	Bacc. excluding Univ. of Iowa
Average Years Teaching Experience	5.4	5.1	9.0	6.8	4.8
Average Years Teaching Experience at Present Program	4.43	3.39	8.85	4.29	2.26

Faculty Education Course Credit

Courses designed to increase skill in teaching may be an asset to educators. The questionnaire to faculty members asked how many semester or quarter hours of credit had been earned in education courses, through a department of education, during formal education. Both the percentage of faculty members who have had such courses, and the number of courses they have had, are shown on Table 2.14.

Table 2.14

Credit for Education Course Work, Iowa Faculty,
by Type of Nursing Program

	Type of Nursing Program				
	Practical	Associate Degree	Diploma	Bacca- laureate	Bacc. excluding Univ. of Iowa
% Faculty with Some Credit for Teacher-Education Courses	54.7	57	50.5	60.5	46.1
Average Credit Hours in Education Convert- ed to Semester Hours	9.6	9.2	11.2	14.1	15.0

Overall, about half of Iowa's nursing faculty appeared to have at least some college courses related to teaching; baccalaureate faculty (excluding The University of Iowa) have the lowest percentage of members with such credit, while associate degree faculty have the highest percentages.

Semester hours of education credit earned were averaged, based on the number of faculty members who had earned some credit. In Table 2.14 quarter hours of credit were converted to semester hours by reducing them by one-third. (Three academic quarters approximate two semesters). Baccalaureate faculty have the highest average of earned credits. Though they have the highest percentage of faculty members who have completed education courses, practical nursing and associate degree faculties are lowest in the average number of credit hours earned. Most institutions provide in-service programs of help to faculty members; some of these programs are quite comprehensive.

Use of Faculty Time

Faculty members were asked to estimate the percentage of their time spent in classroom teaching, clinical teaching, research, nursing practice other than teaching, administration of a school of nursing, and administration of nursing services.

The comparisons between time spent in clinical teaching and time spent in classroom teaching were made. Based on the assumption that part-time teachers are employed 20 hours per week, average percentages were calculated, after converting part-time faculty members to full-time equivalents. Table 2.15 shows the average percentage of time faculty members spent performing various functions, by type of program. Faculty who indicated that they were employed both in practical nursing and associate degree programs, under the ladder concept, were counted as one-half time employees in each program, since there was no way to tell which percentage of time was spent in which program. Also, judging from notes attached to questionnaires, some respondents counted as "administration of nursing school" such tasks as grading papers and participating in meetings--tasks more appropriately considered part of classroom or clinical teaching. Thus the "administration" category probably includes activities not strictly administrative, thereby reducing percentages in the teaching categories. Also, the "research" category was sometimes interpreted to include reading and class preparation.

By this measurement, practical nursing faculty spend larger percentages of time in classroom teaching (35.1%) while associate degree faculty spend the largest percentage in clinical teaching (65.1%) and the smallest percentage in the classroom. Baccalaureate faculties spend the smallest percentage in clinical teaching. Very little nursing practice and research, aside from teaching, were reported.

Table 2.15

Percentage of Faculty Time Devoted to Various Functions, In Full-Time Equivalents, By Type of Nursing Program

Function	Practical	Associate Degree	Diploma	Bacca-laureate
Classroom Teaching	35.1%	26.1%	29.3%	29.9%
Clinical Teaching	53.2%	65.1%	54.0%	51.3%
Research	1.0%	-	1.4%	3.0%
Practice of Nursing not Teaching	.7%	.6%	1.0%	1.3%
Administration: School of Nursing	9.4%	8.0%	13.8%	13.2%
Nursing Service	-	-	.3%	1.1%

Student-Faculty Ratios

According to the administrators' questionnaire responses, diploma schools had the lowest student-faculty ratio both in classroom and clinical practice. For clinical practice, the maximum number of students allowed per instructor is 10, according to the Iowa Board of Nursing and the Department of Public Instruction regulations. Associate degree and baccalaureate programs are closest to this limit.

Table 2.16

Student-Faculty Ratios, by Type of Nursing Program

	Classroom	Clinic
Practical	31.1-1	9.1-1
Associate Degree	26.6-1	9.8-1
Diploma	24.7-1	8.0-1
Baccalaureate	25.5-1	9.6-1

Students and Graduates

As the National Commission for the Study of Nursing and Nursing Education concluded, there may well be more drastic differences among programs of the same type than between types.¹⁸ Turn now from examination of differences of characteristics of the education programs. This report next considers differences in characteristics of students who choose various programs, and some employment characteristics of graduates from various types of nursing programs.

The Commission did not conduct a study of nursing students, but such studies were conducted in Iowa in 1968¹⁹ and in Georgia in 1971.²⁰ Both arrived at similar conclusions:

Students' academic rank in high school graduating classes were, overall, highest for students entering baccalaureate programs and lowest for those entering associate degree programs. However, the difference between associate degree and diploma student rankings was small.

In Iowa, fifty-eight percent of the baccalaureate students ranked in the top 10% of their graduating classes, compared to 31% of the diploma and 27% of the associate degree students. However, when ranking within the top quarter of the high school graduating class is examined, the difference between baccalaureate and other programs decreases, and the difference between associate degree and diploma students disappear entirely. (Ninety-two percent of the baccalaureate students and 71% of the diploma and associate degree students ranked in the top quarter of their high school graduating classes in Iowa 1968).²¹ The same pattern holds when high school grade-point averages are compared for Iowa students. Eighty-one percent of the baccalaureate students had grade-point averages of 3.0 or higher, compared to 60% for both diploma and associate degree students.²² Perhaps the most pertinent conclusion is that nursing students overall have superior scholastic ability. It should be noted parenthetically that associate degree programs may be answering special needs and may increase the supply of nurses by providing education for a group of

students not previously served. Older students who already have family responsibilities which preclude their changing residence to attend programs, and students whose financial constraints are great, appear to take advantage of the associate degree opportunities. Both the Iowa and the Georgia studies found that associate degree student bodies contained larger percentages of students who were older, married, or living close to the program. Iowa's study also found that associate degree students considered financial constraints a larger factor in choosing a program than did students in other types of programs.

The ideal way to judge programs would be to measure the competence of graduates' practice. Data upon which to base such a judgment are not available, but a few practice characteristics of RNs can be summarized, using data from the Commission survey. The type of basic education programs from which nurses graduated, and the highest degrees they now hold, were examined in relation to full-time employment, salary, type of position held, and field of employment. For LPNs, comparisons by highest degrees held were not applicable; only three percent had obtained nursing education beyond the one-year basic program. The Iowa Board of Nursing's licensure form for practical nurses does not include questions about type of degree held or major clinical area; hence, information is limited and comparisons are not possible.

Perhaps the first question relevant to the practice of graduates is: "Are the graduates actually employed in nursing?" The results of the Commission's survey show that the percentage of nurses by basic education employed full-time was 59.7% for practical nursing, 72.3% for associate degree, 62.5% for diploma, and 74.4% for baccalaureate graduates. Overall, 64% of Iowa RNs are employed full-time. When nurses who earned an additional degree(s) beyond their basic education responded by highest degree held, the percentages employed full-time changed. (See Table 2.17). The category "no degree" includes graduates of diploma programs.

Table 2.17

Percentage of Registered Nurses Employed
Full-Time, by Highest Degree Held

Highest Degree Held	Percent Employed Full-Time
No degree	61.1%
Associate Degree	71.0
Baccalaureate, Nursing	72.8
Baccalaureate, Other	80.3
Masters, Nursing	94.7
Masters, Other	92.1
Doctorate	83.3

Source: Commission Survey, 76.1% of sample responding.

The relationship between basic education and monthly salary ranges for full-time employed nurses is shown in Table 2.18. Diploma educated nurses total 82.5% of the RNs reporting. Because of this predominance, the diploma salary distribution reflects the total RN distribution very closely (compare the last, "total percentage" line of the table with the "diploma" line.) LPNs are paid least, with only 3.6% earning more than \$699 per month. When RNs are ranked by salary, baccalaureate graduates earn the highest salaries, diploma graduates are second, and associate degree graduates third. Perhaps the discrepancy between associate degree and diploma salary may be attributed to age and years of experience; or it may simply reflect the fact that associate degree nursing programs are new to Iowa and large numbers of graduates have not yet acquired pay increases based on experience; or it may be due to a difference in urban/rural location of educational program and employment.

Table 2.18

Percentage of Iowa Nurses With Given Basic Education, Employed Full-Time, Earning Various Monthly Salaries, 1974

Basic Education	\$0-299	\$300-499	\$500-699	\$700-899	\$900-1099	\$1100-1299	\$1300-up	Member by Education	% of RNs With Education
Licensed Practical Nurse	4. %	54.4%	38.0%	3.1%	.2%	%	.2%		
Associate Degree	.6%	14.3%	56.1%	25.4%	2.0%	.3%	1.0%	342	6.4%
Diploma		8.1%	37.9%	33.6%	11.3%	5.2%	2.9%	4434	82.5%
Baccalaureate	1.0%	5.2%	24.6%	40.6%	16.3%	7.1%	5.2%	594	11.0%
% of Total RNs in Salary Range	.9%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%		

Statistics based upon the highest degree held are more significant than those for basic education, in that they reflect the current educational status for people who have acquired additional education after completion of a basic program. The highest degree held was compared with monthly salaries for full-time employed nurses. The result is shown in Table 2.19. By this measure, salary clearly increases with education. The implications of this fact are not clear-cut. On the one hand, salary increase for increased education may provide an incentive for further formal education; on the other hand, as discussed in the Practice of Nursing chapter of this report, formal education does not automatically increase competence. Ideally, competence would be the basis for salary increase, making it likely that some nurses with less formal education would earn high salaries while some with more education would be paid less. In any event, the generalization can be made that graduates from associate degree programs are receiving lower salaries while graduates from baccalaureate programs are receiving higher salaries. Salaries of diploma program graduates reflect the mean.

An examination of the fields of employment (or employment settings) likely to be encountered by graduates at the present time has been done. Table 2.20 shows that the largest percentage of nurses are employed in hospital settings. Nursing homes (hereinafter referred to as health care facilities) also rank high, especially for LPNs (24.8%), associate degree graduates (7.8%), ranking second in this type of employment. Diploma graduates are slightly less likely than associate degree holders to work in a hospital, but more likely to work in health care facilities and as office nurses. Baccalaureate graduates are more likely than average to work in nursing programs, in public health facilities, and as school nurses. This may reflect a combination of employers' job descriptions and the curriculum content of the nursing program. They are less likely to be found in health care facilities, or in work as industrial, office, or private duty nurses.

To summarize, as education increases beyond the basic nursing program levels, smaller percentages of graduates work in hospitals, health care facilities and as private duty nurses, while percentages in nursing programs (as instructors), public health, school nursing and "other" settings increase.

Table 2.19

Percentage of Full-Time Employed Iowa Nurses Holding Various Degrees as the Highest Degree Held, by 1974 Monthly Salary Range

Highest Degree Held	\$0-299	\$300-499	\$500-699	\$700-899	\$900-1099	\$1100-1299	\$1300 up	Total % With Degree	Total # With Degree	% Total Full-Time RNs With Degree
Licensed Practical Nurse	4 %	54.4%	38.0%	3.1%	.2%		.2%			
Diploma	1.0%	8.4%	40.1%	34.6%	10.3%	3.9%	1.7%	100%	3994	74.4%
57 Associate Degree	.5%	14.0%	54.3%	26.2%	2.6%	.8%	1.3%	100%	381	7.1%
Baccalaureate Nursing	.8%	5.9%	24.7%	41.8%	16.3%	6.7%	3.8%	100%	658	12.3%
Baccalaureate Other Field	.7%	4.1%	21.9%	27.4%	24.0%	12.3%	9.6%	100%	146	2.7%
Masters Nursing	3.3%	.8%	5.0%	8.3%	25.0%	30.0%	27.5%	100%	120	2.2%
Masters Other Field	2.1%	2.1%	6.4%	12.7%	21.3%	27.6%	27.6%	100%	47	.9%
Ph.D.	-		15.0%	25.0%	5.0%	20.0%	35.0%	100%	<u>20</u>	<u>.4%</u>
% Total Full-Time RNs in Salary Range	.97%	8.2%	37.5%	33.9%	11.3%	5.1%	3.1%	100%	5366	100. %

Table 2.20

Percentage of Iowa Nurses Employed in Various Fields by Highest Degree Held, 1974

Field of Employment	LPN	No Degree	Associate Degree	Baccalaureate Nursing	Baccalaureate Other Field	Masters Nursing	Masters Other Field	Doctorate	% Total RNs in Employment Field
Hospital	59.9%	64.3%	78.8%	57.7%	45.8%	26.3%	25.5%	48.0%	63.7%
Nursing Home	24.8%	9.1%	7.8%	4.8%	5.7%	2.2%	2.0%	8 %	8.3%
School of Nursing		1.7%	.9%	10.4%	16.1%	51.1%	39.2%	28 %	4.0%
Private Duty	1.4%	1.3%	.4%	.3%	1.0%	.7%			.9%
Public Health	.6%	2.3%	1.2%	6.8%	3.1%	4.4%	11.8%		2.8%
School Nurse		4.6%	1.1%	6.3%	15.6%	1.5%	9.8%	4 %	4.8%
Industrial	.5%	2.1%	1.1%	.7%	.5%		2.0%		1.8%
Doctor's Office	8.7%	9.6%	5.6%	4.9%	3.1%			4 %	8.4%
Other	4.0%	<u>4.9%</u>	<u>3.0%</u>	<u>8.2%</u>	<u>8.9%</u>	<u>13.9%</u>	<u>9.8%</u>	<u>8 %</u>	<u>5.3%</u>
		100. %	100. %	100. %	100. %	100. %	100. %	100. %	100. %
Total Number RNs by Degree		6923	552	943	192	137		25	
% Total RNs by Degree		78.5%	6.3%	10.7%	2.2%	1.6%		.3%	

Knowing what types of positions are likely to be held by graduates can also help educators gear instruction to student needs. Table 2.21 shows the percentages of nurses holding various types of degrees who are employed in various positions. Until the master's degree level is reached, the highest percentage of all groups work in general staff positions, though this percentage declines as education advances. A difference of only 6% exists between baccalaureate and diploma graduates functioning in general staff positions, while nearly three-fourths of the associate degree graduates are general staff. Master's graduates are most likely to be instructors or administrators. Very few holders of master's degrees in nursing are general staff nurses (2.9%), but holders of master's degrees in fields other than nursing are more likely to be found in this direct patient-contact position. In actual numbers, however, this group is very small.

The drift from direct patient care as a nurse's education increases becomes more clear when this information is viewed from the reverse side--the percentage of nurses holding a given degree who work in various types of positions. Table 2.22 summarizes this data. The bottom line, the percentage of the total nursing population holding each degree, may be used as a bench mark to see which positions are held disproportionately by people with given degrees. For example, diploma graduates who constitute 78.6% of the nursing population, are under-represented in positions where fewer than 78.6% of the holders are diploma graduates and over-represented in positions for which the percentage is greater. In Table 2.22, asterisks indicate positions in which the holder of a given degree has a greater chance of being employed. By this measure, associate degree graduates are predominantly in general staff positions. Diploma graduates are less often found in administrative, consultant, or teaching positions, and they are over-represented in the other positions. In general, holders of baccalaureate and master's degrees are likely to be in administration, consultation, and teaching.

While it is recognized that LPNs carry the greatest proportion of direct patient care, among RNs, direct patient care from general staff nurses, then, comes mainly from diploma and associate degree graduates. As discussed later, in the Practice Chapter of this report, there is a need for flexibility in career patterns. Direct patient care should be given by nurses who choose clinical practice, regardless of education level without penalties in salary or status. Yet salaries are lower for general staff nurses, and fewer nurses in these positions have higher education. The data on associate degree nurses is particularly interesting in this regard. The vast majority work in hospitals. Is this because the nurses choose to work there? Because fewer options are open to them? Because, as administrators of the nursing programs tell us, these nurses are educated for this slot? Salaries for associate degree graduates tend to be lower. Is this because these nurses have been stereotyped? Or because they have fewer years experience? Associate degree graduates are concentrated in general staff positions. Is this by choice and the desire to provide direct patient care? Or is it due to stereotyping? Iowa's experience is too short to answer these questions. Further research is needed, and changes in structures must be made accordingly, to insure that competence, not formal education, is the key to wider options for all nurses.

Table 2.21

Percentage of Registered Nurses Holding Various Positions, by Highest Degree Held

Type of Position	No Degree	Associate Degree	Baccalaureate Nursing	Baccalaureate Other Field	Masters Nursing	Masters Other Field
Administrator	62.2%	4.2%	*12. %	*7.8%	*9.6%	*3.9%
Consultant	63.1%	1.2%	*15.4%	*7.1%	*11.9%	*1.2%
Supervisor	*84.5%	4.1%	7.7%	*2.3%	.9%	.3%
Instructor	44.9%	3.0%	*28.7%	*6.8%	*12.9%	*3.4%
Head Nurse	*84.8%	4.2%	9.3%	1.2%	.2%	.2%
General Staff	*80.5%	8.1%	10.0%	1.2%		.1%
Other	*80.5%	3.8%	9.9%	3.0%	*1.9%	*.7%
Total % by Degree	78.6%	6.2%	10.8%	2.1%	1.6%	.6%

* Positions in which the holder of the indicated degree has a disproportionately high chance of being employed. A "proportionate" chance occurs when the percentage of nurses in the population who hold a given degree equals the percentage of nurses holding the position.

Articulation

"Articulation" refers to the transfer of credits from one type of program to another so that nurses can acquire additional formal education without repeating what they already know. In the presence of four types of basic nursing education, it is not surprising that nurses face articulation problems. Overcoming this problem entirely would require standardization of curricula at all schools to such an extent that individual needs of students might not be met. Yet, under the current situation, students must feel a disincentive to seeking further formal education, especially if they believe that both financial costs and costs in time due to repetition of material, will be great. For example, an LPN with one year of nursing education could, ideally, complete an associate degree in one year and a baccalaureate degree in three years by building on existing knowledge obtained not only through formal education but also through work experience and self-learning. While nursing programs increasingly are recognizing these articulation problems and some partial solutions already are in operation, barriers do remain for which solutions must be found if nurses are to be encouraged to continue formal study.

The move from LPN to RN status is facilitated by use of the "ladder concept" now in operation in eight area schools (Des Moines, Calmar, Cedar Rapids, Davenport, Emmetsburg, Fort Dodge, Ottumwa, and Sioux City). The Iowa Board of Nursing describes the ladder concept:

The characteristics of the Iowa Ladder Concept Programs are to offer a core curriculum to the beginning students. Some time during the first year, determination is made as to whether the individual will pursue a practical nursing or an associate degree nursing education. Variation between programs may allow the student to either:

1. Spin-off into the final practical nursing tract or the initial associate degree nursing tract during the fourth quarter of the first year.
2. Complete the one year practical nursing curriculum and terminate at that level or move into the associate degree nursing curriculum for an additional one year.

Either schedule allows for completion of the practical nurse curriculum in one year or the associate degree nursing curriculum in two years.²³

These ladder concept programs are structured to be useful not only for students who can study for two consecutive years and for those whose study ends at the LPN level, but who wish to continue later. One nursing program in Iowa includes articulation from the nurse aide level, through the practical nurse level, to the associate degree nurse level.

Some advanced placement programs grant credit for nursing knowledge, whether acquired formally or informally. Applicants who have a background in nursing theory or who have work experience are evaluated and placed through written and practical challenge examination. Eighteen programs are accredited by the Iowa Board of Nursing to use advanced placement mechanisms (most are practical nursing and associate degree programs), and other institutions use similar articulation mechanisms. Advanced placement is a starting point for easing articulation.

Any transfer to a new nursing program presents problems when credits are assessed, since courses are never identical. Almost always, students lose some time by repeating material. The difficulty is eased in the case of transfer from a practical nursing program to an associate degree nursing program within the area school structure using the ladder concept. Perhaps the most widely discussed articulation program is the transition to baccalaureate programs for individuals who are already RNs. Associate degree graduates may encounter some repetitious content, but associate degree work is measured in the same credit hour system used by baccalaureate programs. Diploma graduates do not have this advantage. As part of the explanation of the rationale behind their recommendation that nursing education "...is positioned in the mainstream of American educational patterns with its preparatory programs located in collegiate institutions."²⁴ the National Commission to Study Nursing and Nursing Education stated:

...their diploma truly isn't standard currency and they are forced to utilize the barter system for advancement.

Since their education has taken place in institutions outside the mainstream of post-secondary education, with its somewhat standardized arrangement of hours, credits, and courses, the

students find their upward pathways strewn with equivalency examinations, placement tests, and the pervasive challenge to prove one's self.²⁵

In 1965 the American Nurses' Association and the National League for Nursing made similar resolutions. They advocated that nursing education be implemented within the general education system rather than in diploma schools, where the cost must be borne directly by the consumer rather than by the entire tax base. Supporting arguments include: the lack of transferability, and the lack of academic recognition for education obtained outside the community college or college-based structure.

Iowa has one experimental baccalaureate nursing program which is specifically designed to address the articulation problem. Under this plan, the nurse who graduated after 1960 from diploma programs accredited by the National League for Nursing can acquire a baccalaureate degree in nursing in one calendar year. In addition, two four-year programs provide blanket credit to RNs for previous coursework. These programs are accredited by the Iowa Board of Nursing to grant baccalaureate degrees in nursing.

Several four-year institutions, both public and private, offer credit for RNs, but grant baccalaureate degrees in fields other than nursing. To qualify for admission to the one master's degree program in Iowa, a baccalaureate degree in nursing from an accredited program, or its equivalent, is required.

While not an articulation problem per se, one additional concern is posed by the student who did not complete a basic nursing program, but who later wishes to reenter the education system. In the questionnaire to nursing program administrators, the Commission included several questions aimed at assessing reentry problems of "students who had some nursing education 10 to 15 years ago, but did not then complete the course of study." (See Appendix B for relevant questions). Students returning after a long absence present not only the problem of estimating equivalency of courses completed, but the additional problem of whether courses completed several years previously are now outdated.

Five nursing programs reported that they treat such returning students as beginning students by granting no credit for past work. Twenty-three nursing programs reported that courses completed previously are evaluated to ascertain whether or not they are equivalent to courses offered by the institution in question, and credit is or is not granted accordingly. Fifteen nursing programs reported the use of teacher-made challenge examinations; credit for the course is granted if the student passes these examinations. Standardized challenge examinations were used by seven nursing programs; three baccalaureate programs commented that these were usually for non-nursing courses. Administrators noted that challenge examinations are not available for all courses. They also reported that relatively few students return to formal education after such an absence (34 LPN and 135 RN applicants over five years).

Specialized Nurse Practitioner Programs

A number of factors have led to the development of the "expanded role" or "nurse practitioner" concept in nursing. During the past decade, the nation and the health care industry have reviewed with alarm the warnings about a "health manpower crisis." Eager to avert this shortage crisis, the public and its legislators have supported the emergence of a variety of differently trained health workers.

Throughout the 1960's, much effort was expended on seeking solutions to manpower problems. Commissions and committees were appointed to identify needs and issues. Demonstration projects and training programs were initiated, aimed at training new physician-support personnel and the extension of the traditional roles of available medical personnel.

As social concern grew for the right of all people to health care specific efforts to bring health service to deprived populations emphasized the importance of ambulatory care into the forefront. In the early 1960's, experiments in expanding the nurse's role in maternal and child care in ambulatory settings began. At the University of Colorado, Loretta Ford, R.N. and Henry Silver, M.D. developed the pediatric nurse practitioner

project in 1965.²⁶ This project was designed to prepare professional nurses at the post-baccalaureate level to provide comprehensive well-child care in ambulatory settings. Lewis and Resnich at the University of Kansas established an experimental program in 1967 to train nurses in management of patients with chronic disease in outpatient departments.²⁷ Three faculty members of the University of Washington School of Nursing engaged in primex projects. These projects were designed to prepare the professional nurse "to reach out and take an active front line position in providing primary health care."²⁸

The success of these government funded projects in providing quality care has set trends in educational programs and health care delivery patterns.

In 1973-74 a directory listing programs for preparing RNs for expanded roles was prepared jointly by the American Nurses' Association and the U.S. Department of Health, Education, and Welfare. The directory lists 83 short-term educational programs leading to certification. The programs vary from 2-12 months in length. The titles include Pediatric Nurse Practitioner, Family Nurse Practitioner, Primary Care Practitioner, Midwife and Family Nurse Practitioner, Maternal Nurse Associate, Pediatric Nurse Associate, Adult Health Care Practitioner, Adult Health Associate, Ambulatory Child Health Care Practitioner, OB-Gyn Nurse Practitioner, Rural Health Care Nurse, Ophthalmic Nursing Practitioner and School Nurse Practitioner.

Each program defines the nurse practitioner role according to its goals and objectives. However, programs all agree that an important function of the nurse practitioner is the delivery of primary care: identifying the health status of an individual or family; screening for problems that need to be referred to a physician or other resource; managing acute or episodic illnesses; managing stable chronic illnesses, teaching patients health maintenance, utilizing community resources in meeting patient needs; counseling, and coordinating all community resources in meeting patient needs, counseling, and coordinating all phases of the patient's

health care. Emphasis is placed on preventive care and health maintenance. Specific responsibilities may include taking patient histories, performing physical examinations, ordering and interpreting laboratory studies, regulating medications and diet, performing health maintenance procedures, counseling in mental health, teaching patients, and counseling in family planning.

There are 56 master's programs which prepare nurses for the expanded role listed in the directory.

At present, two major concepts are apparently being used to describe the emerging role of the nurse. One school of thought says that a new role should emerge for nurses which includes a new type of service. According to the U.S. Department of Health, Education, and Welfare, the functions of this expanded role would include the ability to:

1. Assess the physical and psychosocial health status of individuals and families through health and developmental history taking and physical examination;
2. Evaluate the assessment data in order to make prospective decisions about treatment in collaboration with physicians and other health professionals;
3. Institute and provide routine health care to patients within established regimes; and
4. Provide counseling and health teaching to patients and their families.²⁹

The titles frequently used when referring to the health worker in this expanded role are Physician's Associate and Nurse Practitioner.

The second school of thought views the emerging role as simply an extension of those services already rendered. That is, services presently rendered are to be extended to a greater number of clients--an increase in the quantity rather than quality. The title most frequently used to refer to this health worker is Physician's Assistant. Andreoli³⁰ and Hershey³¹ describe the Physician's Assistant as a dependent worker trained to perform selected physician's activities and to work under a physician's supervision. This worker is developed primarily through an apprenticeship.

The first Physician's Assistant Program in this country was established at Duke University in 1965, the same year that the first Nurse Practitioner Program was established at the University of Colorado.

The National League for Nursing, the American Nurses' Association, and the American Association of Colleges of Nursing have issued a joint statement calling for more extensive and efficient use of nurses in the country's health care system. Further support appears in a report issued by the Secretary, Department of Health, Education, and Welfare in 1971, emphasizing the need for extension of the scope of nursing practice.

There is one Nurse Practitioner Program in the state of Iowa initiated in April, 1972, the Pediatric Nurse Practitioner Program at The University of Iowa. It was conceived and developed under the joint auspices of the College of Nursing and the Department of Pediatrics, College of Medicine. The design included two approaches to the program. A four-month concentration of learnings leads to certification. The second approach selected graduate students enrolled in the Nursing of Children Master's program and take pediatric nurse practitioner classes and earn simultaneously both certification and Master of Arts degree.

The Pediatric Nurse Practitioner Program at Iowa was supported through May, 1975 by grant monies from the Maternal Child Health Service, Division of Health, Education, and Welfare. However, the two colleges propose to continue the program.

Six classes had graduated as of May, 1975. Of the 52 graduates, 23 earned certification only and 29 earned the Master of Arts degree. Of the certification-only graduates, 13 are employed in public health care settings and 5 are employed by physicians. The other five work in a school, a neighborhood health clinic, a rehabilitation center, and the Iowa State Department of Health. Specific employment data was not available on the degree graduates; however, the program director stated that the majority are employed in teaching positions, with approximately a third in expanded role settings.

The Iowa Hospital Association is currently conducting a project to prepare Family Nurse Practitioners to work in nursing clinics in rural Iowa. They are supporting six nurses to attend the 12-month Family Nurse Practitioner program at North Dakota.

The University of Iowa College of Medicine initiated a Physician's Assistant program August, 1972. To date, it has graduated 10 Physician's Assistants. A class of 17 finish in August, 1975.

Footnotes, Chapter Two

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- 2 American Nurses' Association, Facts About Nursing, a Statistical Summary, 1965 ed, (New York: American Nurses' Association, n.d.), p. 87.
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- 6 American Nurses' Association, Facts About Nursing 72-73, (Kansas City: American Nurses' Association, 1974), pp. 75, 80.
- 7 "Annual Reports of Nursing Education Programs," Files of Iowa Board of Nursing, 1974.
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- 9 American Nurses' Association, Facts About Nursing, a Statistical Summary, 1965 ed. (New York: American Nurses' Association, n.d.), p. 187.
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- 21 Glick, op. cit., p. 31.
- 22 Ibid, p. 32.
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Chapter Three

CONTINUING EDUCATION

The persistence of knowledge expansion and technological advancements in the health field make it imperative that nurses continue to learn both formally and informally, beyond their basic nursing education. Education can continue in many ways, but this report uses the term "continuing education" as defined by the Iowa State Coordinating Committee for Continuing Education: "participation in an organized continuing education experience under responsible sponsorship, capable direction, and qualified instruction."¹

The attempt to standardize measurement of participation in continuing education in a form that would transfer across programs and across state lines resulted in the establishment of the Continuing Education Unit (CEU): ten contact hours of participation in continuing education experience as defined above.

The Iowa Task Force on the Use of Continuing Education Units makes it clear that the term "contact hours" includes such educational methods as independent study, correspondence study and other types of learning experiences.² As adopted by the Commission, this definition excludes in-service training sessions and refresher courses, but does include course work toward an additional academic degree or diploma.

This chapter examines the number and geographic distribution of continuing education programs available to Iowa nurses, and indicates the extent to which nurses avail themselves of these opportunities. Although not included in the Commission's definition of continuing education, in-service training programs and refresher courses offered by community colleges are also discussed. They are important learning resources and must not be ignored. Attention is then turned to continuing education as defined by the Commission: additional academic degrees following basic education, and workshops, seminars, "short courses," etc. sponsored by educational

Davenport, and Waterloo. The western half of the state lacked such course offerings at that time. In addition, area schools offered eleven refresher courses in coronary care and pharmacology which were attended by 191 people, some of whom may not have been nurses. Six of these 11 courses were available in the western half of Iowa.

One measure of the effectiveness of refresher courses is the percentage of nurses completing such courses who do indeed return to practice. Current information on rates of return is not available. However, in 1966 the State Health Occupations Education Office conducted a pilot project in which ten refresher courses were offered in various locations across the state. Of the 109 previously inactive nurses who took the course and responded to a follow-up inquiry, 56% were employed one year after the course ended. (83.6% of these were employed part-time).³ While this reactivation rate may be lower than the ideal, refresher courses do appear to contribute to reactivation. They should therefore be made widely available.

In addition to refresher courses and in-service training, some research groups have also excluded the attainment of additional academic coursework toward degrees; but as indicated above, the Commission recommends that coursework toward an academic degree beyond basic nursing education qualify for continuing education. The Commission's survey found that 8.4% of the RNs and 2.3% of the LPNs responding have already earned additional degrees beyond their basic preparatory nursing education. Perhaps these low percentages reflect lack of geographic accessibility (particularly of baccalaureate programs), articulation problems which prolong the time needed to complete a degree, and financial and familial constraints of working nurses. Other contributing factors may include: lack of incentives provided in the form of job recognition and pay, and lack of personal or professional motivation.

Many nurses are now working toward additional academic degrees (6.6% RNs, 6.7% LPNs). Statistics for additional degrees already earned represent an accumulation over time, while statistics for nurses now in school

represent one point in time. The latter percentages are larger than the former, suggesting an acceleration in the rate at which nurses are returning to additional degrees. Of RNs currently working toward academic degrees, 14% are in baccalaureate programs in nursing, 12% in master's degree programs in nursing, and 26% in baccalaureate programs in fields other than nursing. Among LPNs currently working toward degrees, 73% are in associate degree programs in nursing, 11.5% in baccalaureate programs in nursing, 9.2% associate programs in other fields. 8.4% are working on baccalaureate degrees in other fields.

Since CEUs were instituted for use in measuring noncredit continuing education, a measurement is needed to integrate academic degree work into the system of record-keeping. A method for translation of academic coursework into CEUs is currently in process. As an example, Arizona State Nurses' Association has set one semester hour credit to mean 1 to 1.5 CEUs,⁴ roughly consistent with the standard, one CEU per ten contact hours.

Continuing education most often is thought of as seminars, workshops, conferences, institutes, etc.--usually a day or two in length or as courses shorter than an academic quarter. The usual sponsors for continuing education programs include professional organizations, nursing programs, four-year colleges and universities, area schools, and such health care organizations as the Iowa Hospital Association, and the Health Facilities Association of Iowa. The Commission surveyed by letter many of these groups,⁵ to determine the location, length, fee charged participants, date, number attending, and title of the continuing education programs for nurses which they had sponsored over the past five years. The following discussion includes 1973 offerings only, in order to be consistent in time span with the Commission survey, in which nurses reported participation in continuing education programs.

To assess the geographic distribution of continuing education opportunities, the reported programs were counted for each of the Governor's sixteen planning areas. (These area boundaries and area designation

numbers do not exactly match those of the area community college system. Community college offerings were counted in the location where the class was held, and appear in the total according to the planning areas in which they were held.)

Reported offerings sponsored by The University of Iowa College of Nursing and by health and professional organizations were clearly relevant to and designed for nurses. The State Health Occupations Education Office reports were used to assess area school offerings. Offerings relevant to nurses had to be isolated from offerings designed for, and probably attended by, primarily other types of health personnel, or by the general public. Eliminated from the count of area school offerings likely to be relevant to nurse continuing education were: (1) courses designated as "refresher" or "review", which do not meet the Commission criteria for continuing education; (2) courses designated for other health care personnel, such as nurse aide training; (3) courses designed for the general public, such as first aid, exercise classes, and "prenatal for parents". Courses which contained in the title such words as "nurse", "LPN", or "RN" were counted separately; they appear on Map 2, page 79, along with nursing programs sponsored by health and professional organizations. Area schools also offered many courses helpful to health personnel including, but not restricted to, nurses. Titles such as "coronary care", "hypertension", "death and dying", and "hematology" were in this group. These courses, plus the above-described courses specified for nurses, appear on Map 3, page 80. It is this count that more accurately reflects the choices open to a nurse living in a given area who wishes to attend educational programs.

It is not only the number of offerings available to nurses living in a given area that is important, but also the length of the offerings. Some are one-day presentations while others allow time to explore a topic in more depth. The number of offerings of 20 or more contact hours are given on Map 4, page 81. (Some area schools did not report contact hours, making it necessary to estimate, using starting and ending dates).

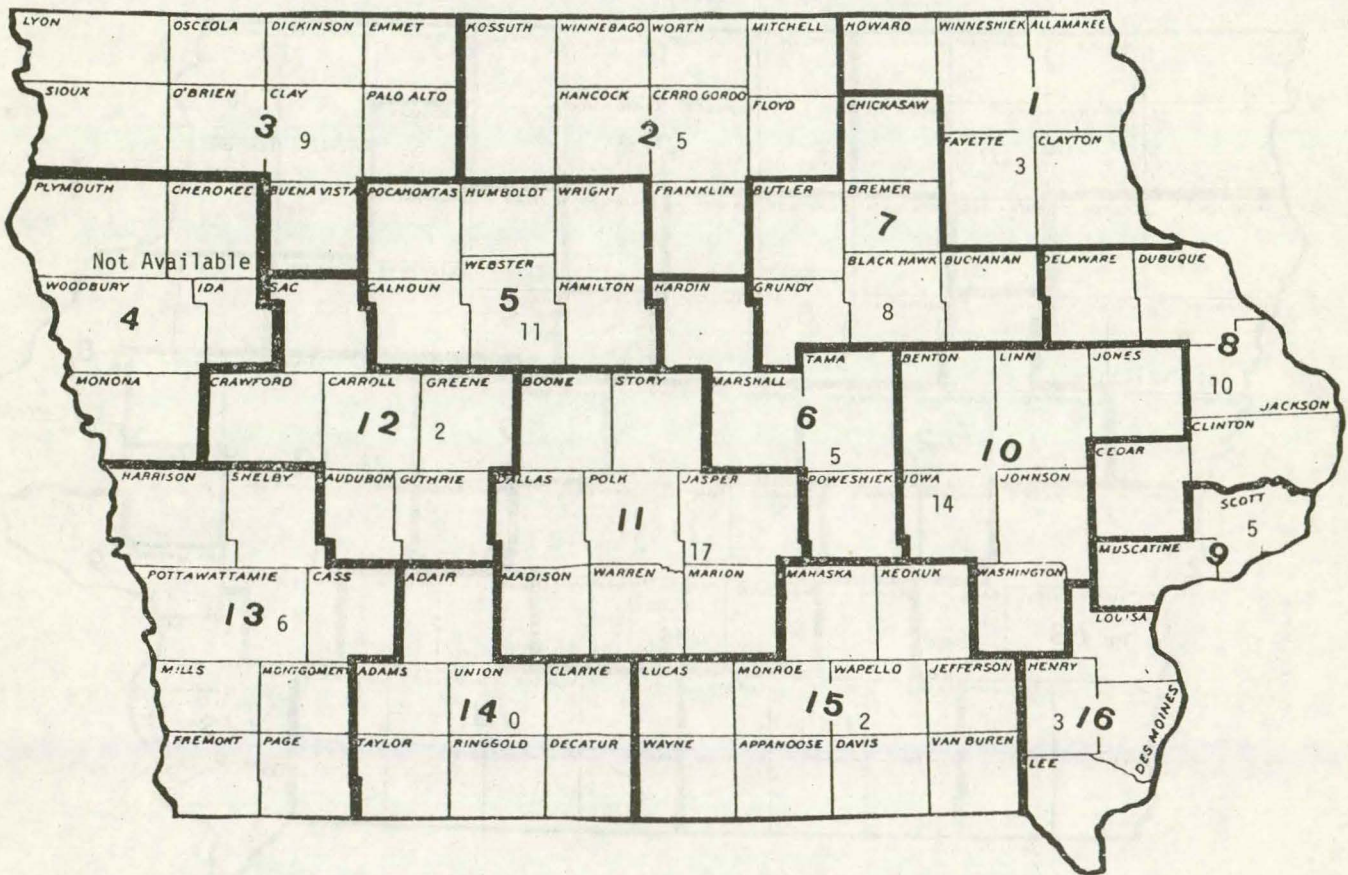
While there are considerably fewer lengthy than short courses from which to choose, the geographic distribution remains proportional to total offerings.

Content is the most important factor in judging the available programs. A balance should exist between offerings helpful to nurses generally, and offerings helpful to specialized nurses. Ideally, various levels would also be addressed, so that beginning practitioners and expert clinicians would all find continuing education opportunities. Information detailed enough to make possible an evaluation of content was not available, but from the titles reported it was possible to count the number of topics addressed in continuing education offerings. Map 5 on page 82 summarizes these topics, by geographic area. Several area schools offer similar courses in various locations.

By all these measures discussed, Areas 12 and 14 have the most acute shortage of programs; however, they adjoin Area 11 where the greatest number of programs is available.

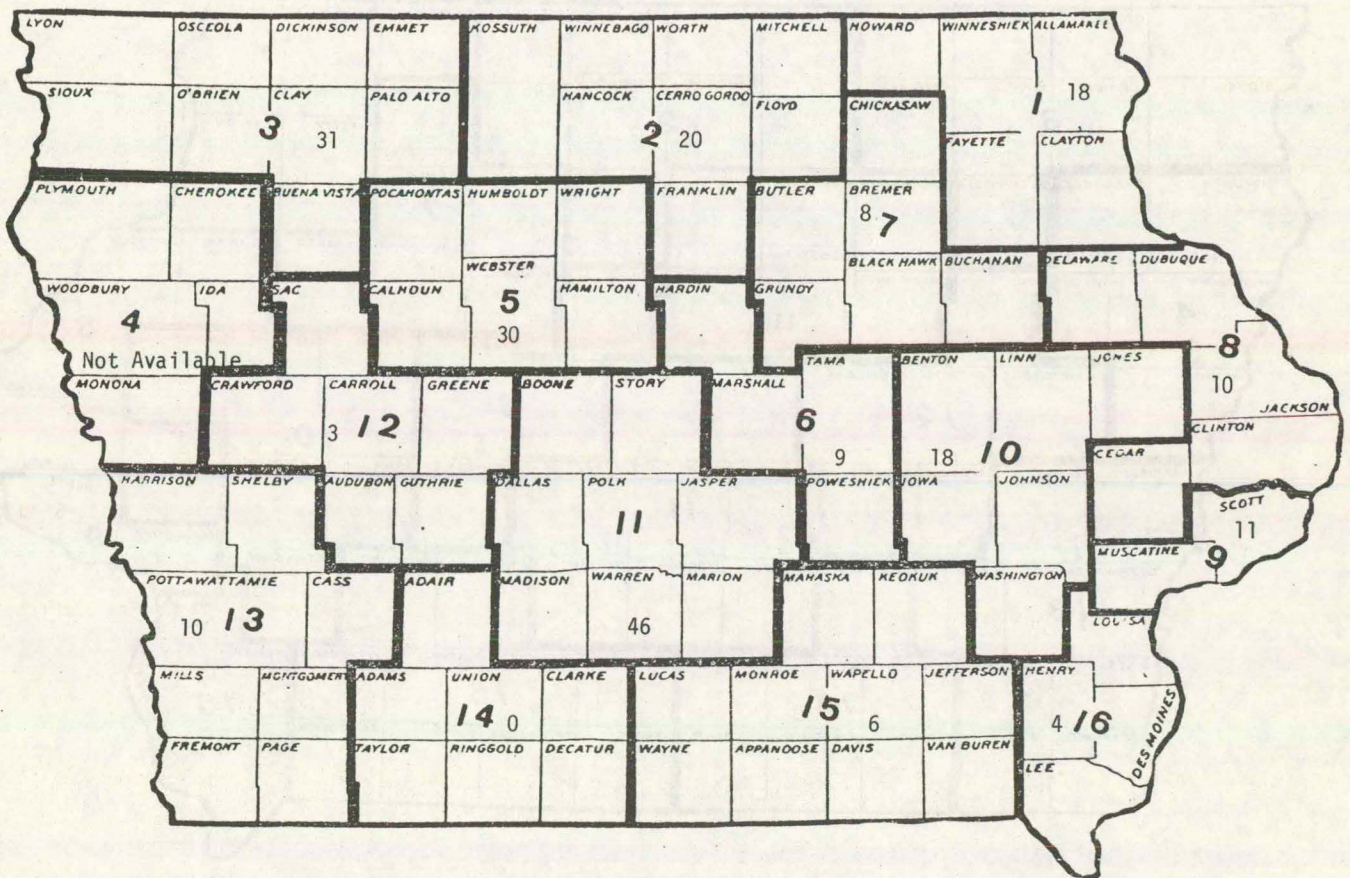
In summary, it appears that the network for continuing education already exists, as there are offerings within relatively easy driving distance of all Iowa areas. In the future attention should be focused on content, to ensure that wide varieties of topics, at varying levels of complexity, are offered.

Number of Continuing Education Offerings Specifically Designed for Nurses, by Area, 1973



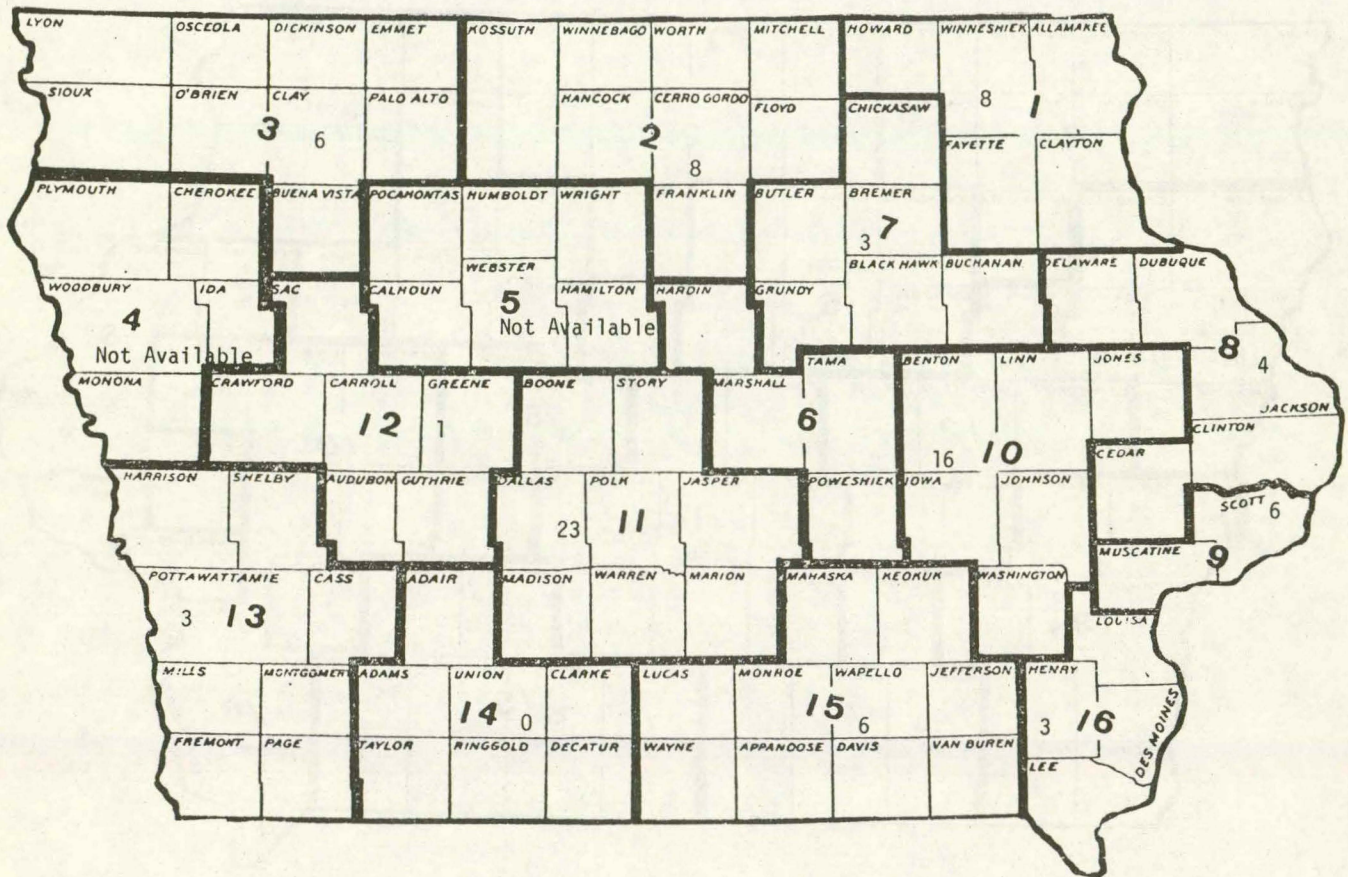
Map 2

Total of Nursing and General Health Continuing Education Courses Likely to be Relevant to Nurses, by Area, 1973



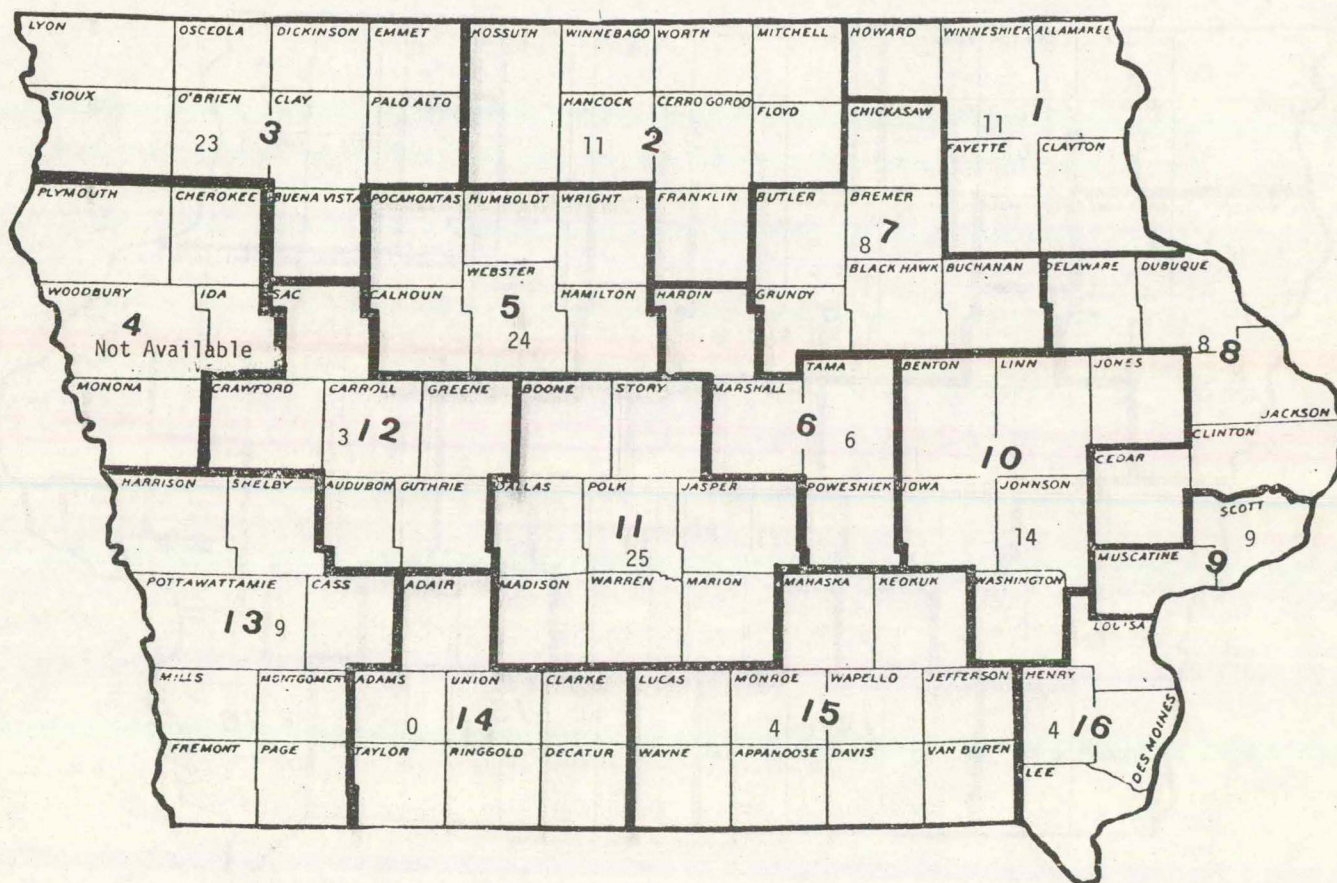
Map 3

Number of Continuing Education Offerings Relevant to Nurses,
Twenty or More Contact Hours in Length, by Area, 1973



Map 4

Number of Topics Addressed by Continuing Education Offerings Relevant to Nurses, by Area, 1973



Map 5

It was not possible to determine the number of nurses attending these programs since health personnel other than nurses undoubtedly attended some of them. Therefore, the number of nurses participating in continuing education was estimated from the Commission's survey responses. Nurses reported for themselves the number of hours of continuing education programs they had attended during 1974. Table 3.1 shows hours of attendance reported by nurses:

Table 3.1
Continuing Education Participation

<u>Hours</u>	<u>Percentage of LPNs Participating</u>	<u>Percentage of RNs Participating</u>
None	55.3%	51.3%
1 - 9	16.2	16.4
10 - 19	12.1	11.4
20 - 39	9.2	10.2
40 - 59	3.2	4.8
60 hours and over	4.1	5.6

The lack of participation is striking. More than half of the nurses responding reported they had attended no continuing education programs whatsoever. About 70% reported less than ten hours of participation.

Nurses were also asked to identify the sponsor(s) of continuing education programs which they attended. Table 3.2 shows the results.

Table 3.2
Sponsors of Continuing Education

<u>Sponsor</u>	<u>% of Total Hours By Sponsor - LPN</u>	<u>% of Total Hours By Sponsor - RN</u>
Iowa Board of Nursing	2.8%	2.5%
Health Occupations Education (through area schools)	9.2	5.5
Iowa Nurses' Association	4.9	15.9
Iowa League for Nursing	.9	1.2
Iowa Federation of LPNs	15.0	.7
Iowa Hospital Association	6.2	7.2
University of Iowa	4.6	9.4
Other Universities or Colleges	13.2	17.0
Other	43.4	40.2

Status of Mandatory Continuing Education

The Commission surveyed (see page 5) licensing boards to ascertain if and how mandatory continuing education for nurses relates to relicensure in their jurisdictions. (Guam, Puerto Rico and the Virgin Islands were included in this survey, in addition to state licensing boards for LPNs and/or RNs). As of April 1974, 57 boards replied. A copy of the composite responses follows. Five states reported that continuing education was a requirement for relicensure, and three states had such bills in the legislature or in the drafting stage at the time of the survey. However, according to the American Nurses' Association, as of April, 1975, only two states had actually passed such laws and neither is yet in effect. California will begin requiring continuing education in two or three years. An attempt to rescind this law failed, though a postponment of effective date was granted. Colorado will begin this requirement for RNs only, in 1977. In Oregon, continuing education is required of a nurse whose license has lapsed for five years. This requirement has operated for RNs since 1957 and for LPNs since 1973. Since 1973, South Dakota has had a law which permits the licensing board to add educational requirements; however, the voluntary system is still in operation by choice of the board. New Mexico's requirement which was written in Rules and Regulations, rather than in the State Code, was ruled unconstitutional.⁶ In short, requirements for continuing education tied to relicensure laws have not been tried, hence there is no history by which to judge their effectiveness.

However, 13 states did report that a Continuing Education State Master Planning Committee has been established, though five of these relate only to the RN. These committees are composed primarily of nurses, though a few include representatives from consumers, hospital administrators, physicians and other groups.

In none of the states replying to the survey do professional nurse organizations require continuing education of members but many such organizations have actively encouraged nurses to participate in continuing education.

Questionnaire to all Boards of Nursing
Composite Answer From 57 Replies, April 1974
Commission to Study Nursing in Iowa

Name of your agency: _____

Your name: _____ Title: _____

Please check () the appropriate spaces below:

- I. Does your agency license: a) R.N.s 7 b) P.N.s 5 c) Both 44
no answer 1
- II. Does your state now/will have law which ties continuing education to relicensure for nurses? a) yes 5 b) no 49 no answer 3
- A. If yes, what year did/will it go into effect? 1973; 77; 78 LPN
B. If yes, does it cover a) R.N.s 1 b) P.N.s _____ c) Both 4
C. If yes, does it cover all state licensed health professions?
a) yes _____ b) no 4
D. If no, does your State Nurses Association require continuing education for membership in the Association? a) yes _____ b) no 44 no answer 7
E. If no, does your State Practical Nurse Association require continuing education for membership in its Association? a) yes _____ b) no 44 no answer 7
1. If the answer to either "d" or "e" is yes, did the Association adopt the CEU as the standard of measurement? a) yes _____ b) no _____
2. If "d" or "e" is yes, how many contact hours are required per year by the Association? _____ hours
- III. Has your state legislature defeated a bill which attempted to tie continuing education to relicensure? a) yes 1 b) no 54 no answer 2
- A. If yes, did the bill cover all licensed health professions?
a) yes _____ b) no 1
B. If yes, what year was the bill debated? 19____
- IV. Is there now a bill being drafted in your state legislature that will tie continuing education to relicensure for nurses? a) yes 2 b) no 50 no answer 5
- A. If yes, will it cover all licensed health professions? a) yes _____ b) no 2
- V. Do you have a State Master Planning Committee for continuing education for nurses? a) yes 13 b) no 42 no answer 2
- A. If yes, are they responsible for coordinating continuing education programs for 1) R.N.s 5 2) P.N.s _____ 3) Both 6 no answer 2
B. If yes, to whom is the Committee responsible? _____
C. If yes, which constituencies (composition) sit on the Committee?

- VI. Has your state collected any evidence or conducted any studies which demonstrate that voluntary continuing education does or does not work for nurses? a) yes 5 b) no 48 no answer 4

Again, any related material/additional information related to the above questions that you can provide will help in our study of nursing. Please use the reverse side for explanation (by item number) and/or additional information. Thank you.

James B. McCord - Director

The Commission's survey sought the opinions of Iowa nurses concerning voluntary continuing education. To the question, "Do you think that the voluntary continuing education concept has worked for Iowa nurses?" 62% of the RNs and 73% of the LPNs replied "Yes". Interestingly, the percentage of nurses believing that this voluntary system works is larger than the percentage of nurses reporting actual participation in that continuing education system.

The Commission's survey of Iowa nurses included the question, "If continuing education were required for a relicensure to the extent of 50 contact hours per year, would you drop your Iowa license?" In reply, 15% of the RNs and 3.9% of the LPNs replied "Yes". 41.8% of the RNs and 49.4% of the LPNs replied "No". A response of "undecided" was given by 42.9% of the RNs and 41.7% of the LPNs. Judging from the letters that the Commission received from Iowa nurses, this question was widely misinterpreted to mean that the Commission was advocating the requirement of 50 contact hours, or five CEUs per year. This misunderstanding undoubtedly distorted the responses, since 50 contact hours a year may well be an unreasonably large requirement. Yet, even taking into account this misunderstanding, relatively few nurses felt strongly that they would leave the profession and, undoubtedly, if continuing education becomes a requirement, even fewer would actually leave.

The need for continual upgrading of knowledge is widely recognized. As stated in Abstract for Action:

In our survey of nursing organizations, medical societies, and health management representatives, we found almost unanimous agreement on the growing necessity for increased and improved programs in the field of continuing and in-service education. The respondents were in close accord in their feelings that technological advances, altered aspects of practice and care delivery, and the general social changes in the health profession and the larger culture would combine to make life-long learning a practical necessity.⁷

Professional organizations join in the belief that life-long learning is a necessity.

The statement on continuing education from the American Nurses' Association reads in part:

The American Nurses' Association endorses the concept of continued learning for all nurses as one of the means by which they can maintain competence and meet the standards of practice developed by the profession. The primary responsibility for maintaining competence in nursing practice must be assumed by the individual. However, with the rapid emergence of new knowledge and technologies and continuing social changes, a concerted effort must be made by the profession to assist each nurse to develop and improve practice and to exercise leadership in effecting changes in health delivery services.⁸

The National Federation of Licensed Practical Nurses agrees:

The National Federation of Licensed Practical Nurses endorses the concept of continued education for all licensed practical nurses. Full opportunity to learn is not for the young alone; it is for everyone in any walk of life.⁹

While these organizations recognize the need for continuing education, and have taken steps to encourage members to participate, they advocate that the system remain voluntary. The National League for Nursing advocates that continuing education be made a requirement, so long as the transition to that requirement is well planned and gradual. "In the belief that a continuing education requirement of renewal of licensure of nurses will promote the delivery of optimum nursing care, the NLN Board of Directors supports the gradual and carefully planned implementation of such a requirement."¹⁰

Many problems must be resolved before continuing education becomes mandatory, and the transition should allow for careful planning. Despite the relatively low fee to participants for attendance at most Iowa continuing education programs (according to the Commission's survey of sponsors) and the fairly general geographic distribution of offerings (with some notable exceptions which must be rectified), over half of the nurses responding to the survey reported that they did not participate in continuing education during 1973-1974. Furthermore, the only mechanism in operation in Iowa for removing incompetent nurses from practice is voluntary surrender of license, or court action. A nurse who

passed the State Board examination measuring minimum knowledge for safe practice, (no matter how many years ago that test was taken), may renew a license to practice by sending \$4.00 yearly to the Iowa Board of Nursing. As Ella Allison, Vice-President for Nursing Education, Albert Einstein Medical Center, has said: "For those who insist that having to participate in some form of continuing education will not guarantee learning nor competent practice, I only respond that not having to do it guarantees even less."¹¹ As cited above, professional organizations accept that individual nurses, in conjunction with the nursing profession, must assume responsibility for "quality control"--assurance of competence in practice.

In 1974 a study committee was established by the Iowa legislature to study the need for relicensure laws to require continuing education. As part of their study, all of the professional and occupational licensing boards in the state were polled. Sixteen licensing boards polled, including the Iowa Board of Nursing, filed with the Legislative Service Bureau the response that their board preferred "general legislation requiring continuing education of all professions, but leaving the specifics to the individual licensing board."¹² (Four licensing boards responded that they did not want any legislation pertaining to continuing education linked to the licensures; lawyers were excluded because the Court, rather than a licensing agency, has established requirements for lawyers.) As a result of the work done by the Professional and Occupational Licensing Study Committee, Senate File #321 was drafted and, as of May 1, 1975, was in a subcommittee of the State Government Committee. The Iowa Board of Nursing stated that they were "pleased and impressed with the contents of the bill",¹³ though they made suggestions for clarification. It is a bill which would allow state licensing boards to require continuing education, although the decision to do so would remain with the Board. It defines continuing education as, "that education which is obtained by a professional or occupational licensee in order to maintain, improve, or expand skills or knowledge obtained prior

to initial licensure or to develop new and relevant skills and knowledge.¹⁴

The bill has the following provisions:

Rules may simply create such continuing education requirements or may additionally establish continuing education programs to assist a licensee in meeting such continuing education requirements. Such rules also shall:

- A. Give due attention to the effect of continuing education requirements on interstate and international practice.
- B. Place the responsibility for arrangement of financing continuing education on the licensee, while allowing the board or continuing education provider to receive any other available funds or resources that aid in supporting of their continuing education program.
- C. Attempt to express continuing education requirements in terms of uniform and widely recognized measurement units.
- D. Establish guidelines, including guidelines in regard to the monitoring of licensee participation, for the approval of continuing education programs that qualify under the continuing education requirements prescribed.
- E. Not be implemented for the purpose of limiting the size of the profession or occupation.
- F. Define the statuses of active and inactive licensure and establish appropriate guidelines for inactive licensee reentry.
- G. Be promulgated solely for the purpose of assuring a continued maintenance of skills and knowledge by a professional or occupational licensee directly related and commensurate with the current level of competency of the licensee's profession or occupation.¹⁵

This bill also would allow licensure periods to be readjusted in view of continuing education requirements. Many problems must be solved if continuing education is to be accessible and of a quality that truly increases competence. Time will be required to find solutions to these problems.

Problems in Continuing Education

A practical or structural problem which must be resolved is the adoption of a uniform measurement of credit. Continuing Education Units (CEUs) have been recommended by the professional nursing organizations.¹⁶ The State of Iowa already has a task force on CEUs, and much of the ground work has already been done to facilitate adoption of this unit of measurement. Since it is based on the decimal system, partial units are easily translated. Since it is in operation in other parts of the nation,

credit mobility may be enhanced. According to Louis Phillips,¹⁷ Director of the evening extension program at Furman University, ground work has also been laid for translating college course work into CEUs essentially based on the number of contact hours, just as non-credit CEUs are calculated.

Another practical problem is that a system of recording the participation of nurses in continuing education programs must be established and financed. The Iowa Board of Nursing, the only legal body pertaining to nurses in Iowa, would be the logical depository. A philosophy regarding finance would need to be adopted. All citizens of the state benefit from the availability of competent health workers. With this philosophy, an appropriation could be requested from State government to finance record keeping. Alternatively, the philosophy that it is the responsibility of the individual nurse to keep credentials current might be adopted. Under this philosophy, license fees could be raised to finance record keeping. At the present time, license fees (\$4.00 per year) for nurses are lower than they are for most other professions licensed in Iowa.¹⁸

Of course, requiring continuing education is unreasonable unless it is available geographically, financially, and in sufficient variety to allow each nurse a choice of relevant topics. The ground work for geographic availability has already been established through the geographic distribution of area school facilities. Professional and health organizations have set precedents for carrying the same offering to several sites in the state. Geographic distribution and costs of tuition to participants do not appear to be overwhelming obstacles, according to the reports received by the Commission.

The major problem to be addressed, however, is an increase in numbers and topics of offerings which will be needed to insure that nurses will have sufficient offerings from which to choose, to provide for variety and special interest.

The most important and difficult problem to address is how to assure that continuing education truly does contribute effectively to nurses' knowledge

and that it results in positive changes in nursing practice. A Nursing Outlook editorial stated: "To the degree that continuing education programs are not relevant to the nurses' needs, as she perceives them, they are likely to be form without substance."¹⁹

One of the first tasks to be performed is the establishment of guidelines, for the certification of sponsors of continuing education, which will insure that the people directing the programs truly are qualified and that the content truly is of value. Organizations which have offered continuing education in the past have established potentially helpful guidelines. Organizations and agencies existing to advance the nursing profession are logical choices as groups to assume the responsibility for providing continuing education. Included would be the professional organizations, the Iowa Board of Nursing, and the nursing programs now engaged in preparatory education, as well as other health care groups such as the Iowa Hospital Association and the Health Facilities Association of Iowa. After such groups have been certified, they could bear the responsibility for assuring that their offerings are of good quality.

Essential to such a program is a mechanism to insure input from nurses about course content and evaluation. A system operated by and for nurses provides the opportunity for the individual nurse and the profession as a whole to take responsibility for upgrading knowledge and competence.

Footnotes, Chapter Three

- 1 State Coordinating Committee for Continuing Education, The Continuing Education Unit, (n.p., 1974), p. 1.
- 2 Ibid.
- 3 Program in Health Occupations Education, An Analysis of the Project Reorientation to Contemporary Nursing Practice, (Iowa City, University of Iowa, 1967), p. 32.
- 4 Arizona State Nurses' Association, "Certification of Continuing Education for Registered Nurses," program accepted by the membership of ASNA at the 48th convention, November 11-13, 1971, p. 4.
- 5 Groups contacted by the Governor's Commission regarding the extent to which they sponsored continuing education programs included: The Iowa Citizens League for Nursing, Iowa Nurses' Association, Iowa Hospital Association, Health Facilities Association of Iowa, Iowa Board of Nursing, Iowa Federation of Licensed Practical Nurses, and all the universities and colleges which offer preparatory nursing education programs. Community colleges must register the continuing education programs they offer with the Health occupations office; it was from this office that a consolidated list of their offerings was obtained.
- 6 Dr. Elizabeth Allen, Continuing Education Coordinator, American Nurses' Association, telephone interview, May, 1975.
- 7 Jerome P. Lysaught, An Abstract for Action, National Commission for the Study of Nursing and Nursing Education, (New York: McGraw-Hill, 1970), p. 122.
- 8 American Nurses' Association, "Statement on Continuing Education," (n.p., 1973) p. 1.
- 9 National Federation of Licensed Practical Nurses, Inc., "Statement on Continuing Education 1973," (New York: National Federation of Licensed Practical Nurses, Inc., 1973), p. 1.
- 10 National League for Nursing, "NLN's Role in Continuing Education in Nursing," (New York: National League for Nursing, 1974), p. 1.
- 11 Ella W. Allison, "Q. Should Continuing Education be Mandatory?...", American Journal of Nursing 73 (March 1973): p. 443.
- 12 Professional and Occupational Licensing Study Committee, Report to the Legislative Council and the Members of the First Session of the Sixty-sixth General Assembly, (Des Moines: State of Iowa, 1975), Appendix #2.
- 13 Ibid., Appendix #5
- 14 Ibid., Appendix #4, p. 3
- 15 Ibid., pp.7, 8.
- 16 Louis Phillips, Director of Evening Extension Program, Furman University, telephone interview, April 1975; and Arizona State Nurses' Association, op. cit.
- 17 Professional and Occupational Licensing Study Committee, op. cit., Appendix #2.
- 18 Edith P. Lewis, "Editorial Continuing Education: The Form and the Substance," Nursing Outlook 21 (August, 1973).

Chapter Four

NURSING PRACTICE

The desired end result of preparatory and continuing education is that competent nurses will provide high quality health care. This chapter discusses ways in which nursing practice might be made more effective and employment more attractive to nurses by means of new concepts of recognizing and utilizing competency. The Commission Advisory Committee on Nursing Practice agreed that lack of career mobility discourages nurses from practicing and contributes to the misutilization of those who do practice. When decisions are made according to the rank rather than the competence of the person, both the client and the over-looked health care worker suffer. Knowledge and competence can be wasted in two ways: (1) Job assignments and decision-making hierarchies can prevent some nurses from using their full capability; (2) Discouragement resulting from this situation can cause nurses to retire from nursing practice altogether. Vicki Cooper, in a study done for the Health Policy Advisory Center, summarizes:

Nurses' expectations of equality with other health professionals are also frustrated. A nurse receives a relatively low salary, little status and frequently performs jobs way below her training level.¹

In 1968 the American Medical Association Committee on Health Manpower stated that "it believed greater emphasis should be placed on giving nurses a higher professional role with greater involvement in direct patient care."² How to measure competence and how to fully utilize that competence, is the crux of nursing practice problems. As Esther Lucille Brown, well known nursing researcher and author has said:

No one needs to be a social scientist or a follower of the women's liberation movement to realize that one of the basic causes of the inadequacy of present health care services is the fact that the nursing role was cast in too small a mold to

encourage, or permit, a profession twice the size of medicine to maximize its potential contribution. The National Commission for the Study of Nursing and Nursing Education which has explored the situation in detail, notes that nursing has been insufficiently rewarding to retain approximately one-third of all its graduates, whereas some 88% of women physicians supposedly remain in medical practice.... In contrast to its expectations of the medical profession, society has not expected nursing to be autonomous, creative, and capable of producing a broad sector of top leadership. Hence, it has provided meager funds for professional education and meager remunerations and recognition. The absence of a more positive expectation has had a corrosive effect upon the profession, which suffers from a feeling of inadequacy and lack of opportunity or fulfillment. The profession still seeks self-identity and a greater degree of independence.... It should be in the process of experimenting vigorously with methods for increasing clinical competence and of actively seeking inter-relationships with the entire health fraternity, the immediate concerns of health services and the public at large.³

Model for Career Mobility

If competence is to be fully utilized, as it increases job responsibilities should change. A model for career mobility is presented here. The premise is that individual competence, which is best assessed by peers, could well be used as the basis for decisions concerning occupational responsibilities, roles, placement, etc. Obstacles to career mobility would thus be lessened, nurses would have more freedom of choice, and most importantly, fuller utilization of nursing knowledge, judgment and skills would be achieved.

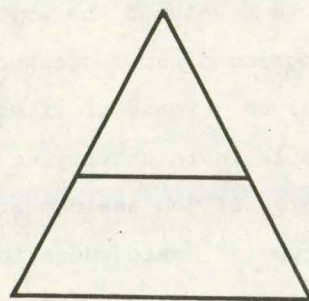
In this model, functional distinctions among nursing personnel are made on the basis of the extent to which an individual has the ability to combine clear-cut information or knowledge with subjective thoughts or judgments and the ability to make predictions, in terms of the total social, psychological and physical outcomes of the patient. Knowledge, here, is divided into two categories, "programmed" and "unprogrammed" knowledge. Programmed knowledge is that part of nursing which is relatively clear-cut and therefore relatively easy to teach and to learn. This category is accessible in textbooks, clinical demonstrations, etc. A nurse possessing this knowledge would be competent to practice safely in planned programs of care, where the decisions are predictable and the knowledge required to make them is well tested. Most graduates of nursing education

programs possess this knowledge and skills. The range of knowledge and proficiency is a continuum; individuals may achieve varying degrees of "depth" or detail within each area, hence becoming competent to practice in increasingly complex situations.

Unprogrammed knowledge is frontier territory in the sense that it is not clear-cut, but rather deals with ambiguities, leaving much to individual judgment. The nurse possessing unprogrammed knowledge has, of course, the programmed knowledge applicable to a chosen area of practice, but beyond that, goes in search of new answers. One of the tools used is critical thinking, defined by Watson and Glaser as a composite including:

- (1) Attitudes of inquiry that involves ability to recognize the existence of problems and an acceptance of the general need for evidence in support of what is asserted to be true;
- (2) knowledge of the nature of valid inferences, abstractions, and generalizations in which the weight or accuracy of different kinds of evidence are logically determined; and (3) skills in employing and applying the above attitudes and knowledge.⁴

The nurse who can synthesize programmed knowledge of a broad scope, and combine it with subjective, critical thinking and positive action, serves the physical and psycho-social needs of the patients and copes with situations which have not been encountered before.



Unprogrammed Knowledge

Programmed Knowledge

Diagram: The body of nursing knowledge resembles a pyramid in that many more people possess the more basic components while relatively few possess the most advanced knowledge. Knowledge, skill and judgment form a continuum along which an individual may progress. Unprogrammed knowledge requires critical thinking ability and the use of subjective judgment; programmed knowledge is more clear-cut.

Effective tools for measuring competence of nurses are limited, but since it is the quality of nurse performance that determines good nursing care,

then it is the evaluation of this performance in practice that needs to be measured. Performance is a combination of thought and action which yields observable results. Therefore, there is some basis for judging whether or not a performance is satisfactory.

Robert Tomlinson, a teacher/researcher at the University of Illinois who concentrates on the area of health careers, referred to the dilemma of assessing competency and remarked:

I subscribed to the position that if an attribute exists--if a performance exists--there are criteria to describe the performance. Further, if there are distinct levels of performance, they can be identified. If they can be identified, then, they can be taught and they can be evaluated.⁵

Developing adequate tools will be difficult, but their development is essential if people are to receive high quality health care and if nurses are to be treated fairly and allowed to fulfill their potential through full use of their knowledge. Unfortunately, given the difficulty in measuring competence, evaluations have often been made on the basis of an individual's preparatory education or academic degrees. As noted by the National Commission to Study Nursing and Nursing Education, the variations between programs of the same type are probably as large as variations between types.⁶ Individuals may have developed the ability to think critically and operate in the unprogrammed knowledge sphere, independently of the education they have received. Years of experience, alone, are also an inadequate measure, since people learn at varying rates and to varying degrees. Career rigidity results if job assignments, pay rates, promotion tracks, etc. are based on the type of basic education which the nurse has completed, or solely on years of experience. Some competent individuals will be overlooked, and some less competent individuals will be working in spheres they cannot handle adequately. The Commission's survey found that salary tends to be higher for nurses holding higher degrees or having more years of experience. This result does not necessarily mean that salaries are set solely according to these two criteria.

But as the National Commission for the Study of Nursing and Nursing Education pointed out:

Some health facilities define promotional opportunities solely on the basis of time in a grade or on formal educational achievements. While there are reasons for recognizing longevity and additional course work, the primary basis for advancement in nursing practice should be demonstrated knowledge and competence, whether obtained through formal education, self-study, or experience.⁷

LPNs who are both competent and capable of operating in the unprogrammed knowledge area present a special case. Under present licensure laws, LPNs must complete additional formal education to become RNs. Since some LPNs possess not only competence but also high degrees of judgment and knowledge, obstacles must be removed so that they can become RNs, if they want to, or advance in LPN careers as far as their abilities allow. Individual performance, evaluated by peers, is the criterion which will require nurses to function at their maximum.

Another serious problem is the tendency to pay clinical nurses less than administrative nurses. (According to the Commission's survey, nurses in administrative positions were more highly paid than average.) A nurse who takes her career seriously and is able to function in the unprogrammed area of knowledge and skill, but who also prefers that clinical work, with direct patient contact, faces obstacles to career mobility. Too often, employers promote in such a fashion that each promotion moves a nurse still further from patients.⁸

Nurses should be able to seek promotion by either of two separate routes, the clinical and the administrative. Not only should nurses be able to choose their own route without penalty, but also there should be mobility between the routes. During the course of a career an individual might choose to gain expertise in several areas of interest.

Related to the present dichotomy between clinical and administrative routes for promotion is the fact that job descriptions may include both clinical and administrative functions, in such a way that nurses spend little

time giving direct patient care and more time attending to clerical or managerial functions. The National Commission for the Study of Nursing and Nursing Education documented this problem as follows:

There is abundant testimony that the direct care of patients is the most satisfying single aspect of their profession for a majority of nurses. Nevertheless, the nurse in practice is very apt to find that 50% to 75% of her time is spent in non-nursing functions. The available opportunities for direct patient care are limited by the necessities for passing medications, maintaining records, and handling clerical and supervisory activities. Indeed, promotion tends to take the nurse further away from direct clinical practice to a managerial function of overseeing care provided by others, often nonprofessionals.⁹

Additional efforts should be made to ensure that clerical functions are performed by non-nursing personnel, and that administrative nursing duties are performed by those who prefer them. Those nurses who choose clinical practice could then truly function as clinicians.

Little is accomplished if nurses acquire the capability to operate in unprogrammed levels of knowledge or to increase their competence if they then have no opportunity to operate in this realm. In order to break down obstacles to career mobility and more fully utilize the skills and knowledge of health care personnel, attitudes must change. If nurses are to use their increasing knowledge, judgment, and decision-making abilities, all health disciplines must re-examine and adjust the way decisions and functions are shared among them.

There are signs that this re-examination is beginning to occur. For example, the role of some nurses who qualify as nurse practitioners, as a result of additional training, has been expanding. This is particularly important as preventive, distributive care becomes more widely recognized, and as the public perceives a shortage or maldistribution of physicians and other health personnel available to provide preventive, primary-level care. There are numerous examples of clinics, particularly in rural or central city locations, where nurse practitioners successfully provide primary care, referring to physicians only those patients whose diagnosis or treatment requires more advanced medical knowledge.¹⁰ The potential

for such practice is just beginning to be explored. Indications of the interest in this phenomenon is pending legislation before both the Iowa Legislature¹¹ and the U.S. Congress¹² for the training of such personnel and the establishment of additional primary care facilities from which they can operate.

This movement in the direction of fuller use of nurse capabilities has implications for the vast majority of nurses working in the more structured settings of hospitals, nursing homes, etc. It emphasizes the whole question of the underutilization of nursing personnel. If a nurse in one setting is expected to use judgment and function to full capacity, but in another is expected to perform routine tasks and rely on others for orders, his/her knowledge and skills are being wasted. At the present time the role a nurse plays and the extent to which knowledge is utilized apparently varies tremendously, depending upon utilization patterns in the particular place of employment.

Since there is no agreement concerning personnel patterns and their impact on quality of care delivered, some employers make staffing decisions based solely upon financial considerations of the institution. If "less expensive" personnel are employed, do they have the knowledge and skill necessary for the well-being of the patient? If, indeed, they are adequate for the job, their salary should more accurately reflect their capabilities.

Senator Moss, while proposing an amendment to provide federal aid for training nurse aides and orderlies, cited (from the study "Nursing Home Care in the United States: Failure in Public Policy") that 80% to 90% of care in nursing homes is given by aides and orderlies, while RNs perform administrative tasks.¹³ Findings in a 1970 study by the U.S. Department of Health, Education and Welfare indicate that this pattern is general in long-term care facilities of all types.¹⁴ RNs composed about 20.8% of the nursing team in these long-term facilities, as opposed

to 39.6% in short term community hospitals.¹⁵ This hiring pattern suggests that personnel other than RNs play a larger patient care role in such long-term settings.

The reliance on personnel with a mixture of educational qualifications appears to hold true not only for long term facilities but for nursing in general. The Allied Health Professions Project at the University of California at Los Angeles identified over 300 nursing activities and ascertained who performed these activities in actual job situations. Sixty percent of the nursing functions were performed at various times by RNs, LPNs and nurse aides, and an additional 28% were performed both by LPNs and RNs.¹⁶ The study comments on functions reserved for RNs as follows:

Procedures included in the remaining 12% of task in the national survey, which are identified as falling exclusively within the realm of the RN, are administrative techniques of planning patient care; assigning personnel; evaluating the quality of nursing care as well as employee performance and making appropriate adjustments in both areas; conducting educational programs for patients and employees; and utilizing complex nursing skills.

It should be emphasized that in the entire gamut of nursing activities, there are only six skills designated as "complex" and not permitted for the LPN, but assigned to the RN exclusively. These specific activities are: administration of I V medications and blood transfusions; reading fetal and cardiac monitoring devices; reading skin tests; tracheal suctioning; and nasogastric intubation.¹⁷

To an extent, this research lends support to the model discussed above, where it was advocated that jobs not be assigned according to previous education only. The research studies indicate that since many kinds of personnel are apparently performing most tasks in many different settings, there is no one course of study which provides specialized ability to perform tasks. However, interpreted another way, the studies substantiate the need for two of the changes earlier advocated in the mobility model: recognition of competence through status and salary, and job responsibilities based upon competency. If, indeed, LPNs and aides do competently perform many tasks which require a great deal of skill and knowledge, is this fact reflected in their status and salary? Also there is no evidence that nurses with high levels of skill and knowledge are

optimally utilized. Until job responsibilities, status and pay are adjusted on the basis of competency--frustration among nurses will remain.

Competency

The utilization of nursing personnel to provide high quality health care really involves a question of judging competency. Until there are adequate tools to do this, the advocated changes will not be possible. The Practice Advisory Committee to the Commission agreed that nurse practice should be evaluated by "peers"--that is, by other nurses engaged in the same area of practice. Generalists should be evaluated by other generalists, and specialists by others in the same specialty. Several methods might be used to accomplish this kind of evaluation of nurse competency:

1. A mandatory peer review system would be in accord with the intent and philosophy of accountability. It would also allow nurses to be free to use all of their knowledge and skills.
2. Certification programs might be established to determine by examination an individual's competency in a given field of knowledge. These would be designed to go beyond merely determining minimum safe practice standards, as the current initial licensure examinations now measure it. Rather than relying on the educational classification LPN/RN, an individual would be certified to work within given fields of nursing at given levels of competency. As nurses complete additional certification examinations, their job responsibilities should reflect this achievement. Certification programs would be needed for specialists as well as for generalists to insure evaluation by peers as defined above. The American Nurses' Association certification program is one example of an attempt to implement this concept. Separate programs exist for each of several clinical specialities, thus ensuring an evaluation by peers. Applicants for certification must submit case studies; this procedure provides an opportunity for a nurse to demonstrate that he/she can use good judgment, or unprogrammed knowledge. Such a mechanism would allow the state to offer solid relicensure qualifications.
3. A form of institutional licensure might be adopted which would include personnel as well as facilities.¹⁸ If this alternative is used it would be essential that people from outside the institution in question be prominently present among the evaluations.

Regardless of the method, efforts to measure and recognize competency will have impact only if employers, nurses, physicians, and other health personnel cooperate to insure that competency is fully utilized in practice. They must recognize that the holding of a certain title or the simple attainment of a certain formal education level does not necessarily reflect ability. Rather, ability is a characteristic of individual merit and competence.

Footnotes, Chapter Four

- 1 Vicky Cooper, "The Lady's Not for Burning," Health Policy Advisory Center Bulletin (March, 1970), p. 4.
- 2 American Medical Association, "Report of the Health Manpower Commission: Summary and Comments," Journal of the American Medical Association 203 (February 12, 1968): 157-164.
- 3 Esther Lucille Brown, Nursing Reconsidered: A Study of Change, Vol. 2, (New York: J. B. Lippincott Company, 1970), p. 493.
- 4 Goodwin Watson and Edward Glaser, Manual for the Watson - Glaser Critical Thinking Appraisal, (New York: Harcourt, Brace and World, Inc., 1964), p. 10.
- 5 Robert Tomlinson, "Mobility: Credential or Competency," (paper read at the Career Mobility Workshop March, 1972, Amana, Iowa) p. 8.
- 6 Jerome P. Lysaught, An Abstract for Action, National Commission for the Study of Nursing and Nursing Education, (New York: McGraw-Hill, 1970), p. 107.
- 7 Ibid., p. 134.
- 8 Ibid., p. 57.
- 9 Ibid., p. 91.
- 10 Robert Oseasohn and others, "Primary Care by a Nurse Practitioner in a Rural Clinic," American Journal of Nursing, 75 (February, 1975): 267-271; and Charles Lewis, "The Use of Non-Physicians in Health Care," Institute of Medicine, Manpower for Health Care (Washington D.C.: National Academy of Sciences, 1974), pp. 69-80.
- 11 Iowa Legislature, House, An Act to Establish a Program for the Development of Health Care Centers for the Delivery of Health Care by Public Health Nurse Practitioners and Making an Appropriation, House File 591, 65th General Assembly, 1975.
- 12 U. S. Congress, Senate, Nurse Training and Health Revenue Sharing and Health Services Act of 1975, S. 66, 94th Cong., 1st sess., 1975.
- 13 U. S. Congress, Senate, Senator Moss speaking for Amendment No. 344 of S. 66, 95th Cong., 1st sess., 10 April 1975, Congressional Record 121: 5730.
- 14 U. S. Department of Health, Education and Welfare, The Effects of Task Delegation on Requirements for Selected Health Manpower Categories in 1980, 1985 and 1990 (Bethesda, Md: National Institutes of Health, 1974), p. 53.
- 15 Ibid., p. 52.
- 16 Lucile A. Wood, A Career Model for Nurse Practitioners, (Los Angeles: University of California, Los Angeles, 1972), p. 17.
- 17 Ibid.
- 18 U. S. Department of Health, Education, and Welfare, Report on Licensure and Related Health Personnel Credentialing, (Washington, D.C.: U.S. Government Printing Office, 1971), pp. 65, 66, 77.

Chapter Five

RECOMMENDATIONS

1. The Commission recommends THE ESTABLISHMENT OF A FREE-STANDING NURSING RESEARCH AND DEVELOPMENT ORGANIZATION WHOSE FIRST FUNCTION WOULD BE THE DETERMINATION OF NEED FOR A DOCTORAL NURSING PROGRAM IN THE STATE.

It is difficult to define, precisely, nursing roles, goals and practice. One possible answer to this dilemma is increasing the number of graduate level nurses. While this may be the case, the Commission believes that the matter needs further study.

Any collection of data is pointless unless it is used as a base for further research to identify the supply, needs, roles and practices of nurses. As an aid to nurses, to nursing curriculum planning by educational institutions, and to health personnel planning in general, there is a need for (1) additional research, and (2) coordination of data collection and research which has already taken place.

One source for financing such a research and development organization might be the developmental funds which will be available through the Health Service Agency serving Iowa under P.L. 93-641.

2. The Commission recommends THAT MASTER'S DEGREE PROGRAMS TO PREPARE CLINICAL SPECIALISTS AND PRACTITIONER SPECIALISTS BE EXPANDED, BUT ONLY IN INSTITUTIONS ACCREDITED TO OFFER BACCALAUREATE PROGRAMS IN NURSING, AND THAT BARRIERS BE REMOVED TO ENABLE THESE INDIVIDUALS TO PRACTICE IN ACCORDANCE WITH THEIR COMPETENCIES.

As the nature of the health care delivery system changes, the role of nursing will expand to include the need for more specialized nurse practitioners in order to meet the primary health care needs of the public, especially since so many communities are unable to attract and/or retain physicians.

3. The Commission recommends THAT THE PROBLEM OF ACQUIRING AND RETAINING GRADUATE LEVEL PREPARED FACULTY IN IOWA'S NURSING PROGRAMS BE EASED

BY:

- A. INCREASING THE LOCALITIES AND OPTIONS FOR GRADUATE EDUCATION THROUGH SUCH MECHANISMS AS EXTENSION CENTERS, PRIVATE COLLEGES AND A VARIETY OF PROGRAM DESIGNS;
- B. PROVIDING INCENTIVES FOR IOWA NURSE EDUCATORS TO EARN ADVANCED DEGREES; AND
- C. URGING EDUCATIONAL INSTITUTIONS TO EXPLORE AND, WHERE FEASIBLE, IMPLEMENT JOINT APPOINTMENTS BETWEEN TEACHING, PRACTICE, AND RESEARCH ASSIGNMENTS.

At this time there is only one master's program in nursing in Iowa. A shortage of graduate prepared nurses exists in Iowa and through the nation. Furthermore, nursing educational institutions face constraints in providing monetary rewards. There exists a general lack of incentives to remain in Iowa for education and/or employment in nursing.

The Commission's survey of faculty members indicated that they are vitally interested in joint assignments which combine the teaching of nursing theory and practice with activities such as research or the practice of nursing apart from teaching duties.

4. The Commission recommends THAT NO ADDITIONAL BACCALAUREATE NURSING PROGRAMS BE APPROVED AT THIS TIME.

Sufficient capacity for the preparatory level of nursing education seems to exist. The only exception is the need for a baccalaureate program in central Iowa, but the Iowa Board of Nursing has already approved such a program, to be located in Des Moines. The Commission recommends, however, that the research proposed in recommendation one, re-evaluate, in 1985, the need for additional baccalaureate programs in nursing.

5. The Commission recommends THE ESTABLISHMENT OF A NURSING EDUCATION PROGRAM IN THE AREA COMMUNITY COLLEGE IN SHELDON, IOWA. WITH THIS EXCEPTION, THE COMMISSION RECOMMENDS THAT NO ADDITIONAL PRACTICAL, ASSOCIATE DEGREE, OR DIPLOMA NURSING PROGRAMS BE INITIATED AT THE PRESENT TIME.

It appears that the nursing programs currently in operation are sufficient in number to serve the State.

6. The Commission recommends THAT NURSING EDUCATION PROGRAMS INSTITUTE METHODS TO INCREASE EFFECTIVENESS AND EFFICIENCY IN THE USE OF AVAILABLE CLINICAL FACILITIES AND, IF NEED BE, DEVELOP ALTERNATIVE METHODS TO ASSURE THAT ALL STUDENTS ACHIEVE THE NECESSARY LEARNING EXPERIENCES.

The availability of adequate clinical facilities is a major limiting factor to the expansion of nursing education programs.

7. The Commission recommends THAT NURSING PROGRAMS IN IOWA EXPLORE AND, WHERE FEASIBLE, IMPLEMENT OUTREACH PROGRAMS DESIGNED TO FACILITATE THE EDUCATION OF NURSES IN THE STATE; AND THAT THE COST OF HIRING FACULTY BE BORNE PRIMARILY BY THE STATE; AND THAT THE FACULTY INCLUDE PERSONNEL WHOSE PRIMARY RESPONSIBILITY IS THE PROVISION OF STATEWIDE EDUCATIONAL PROGRAMMING.

Such programming would facilitate preparation of nurses in Iowa by providing increased accessibility to basic education, continuing education and continued education. The State-wide network would utilize hospitals and existing educational institutions, along with innovative multi-media devices, so that nurses wishing to avail themselves of the resources need not commute excessive distances. Course offerings in the network should be thorough, to include many levels of complexity and all areas of practice.

8. The Commission recommends:

- A. THAT EMPLOYERS BE ENCOURAGED TO USE STAFFING PATTERNS CONDUCTIVE TO PART-TIME WORK, AND TO PRORATE SALARY AND BENEFITS IN A WAY WHICH DOES NOT PENALIZE PART-TIME EMPLOYEES; AND
- B. THAT SUPPORT SHOULD BE GIVEN TO EMPLOYERS AND/OR COMMUNITY EFFORTS TO MAKE AVAILABLE CHILD CARE ARRANGEMENTS WHICH MEET THE NEEDS AND STANDARDS OF PARENTS AT A REASONABLE COST.

Nurses of childrearing age are often employed part-time or unemployed; constraints should be removed for those who do wish to work.

9. The Commission recommends THAT THE EMPHASIS BE SHIFTED FROM DETERRING NURSES FROM LEAVING THE ACTIVE WORK FORCE, TO ENABLING THEM TO RE-ENTER THE WORK FORCE, AS COMPETENT NURSES, AFTER A TEMPORARY ABSENCE.

This recommendation faces the reality that many nurses are likely to be temporarily inactive. Stigmas and barriers to regaining competence, tend to prolong, or make permanent, absence from the nursing work force. Educational programs enabling inactive nurses to regain competency are especially needed in geographic areas where perceived nursing "shortages" exist. Such "shortages" are more often due to maldistribution than to shortage per se. A variety of vehicles may be utilized--including hospitals, area schools and other state-supported schools. A method to let inactive nurses know that re-entry will be facilitated by the accessibility of educational opportunities, will also be needed.

10. The Commission recommends, IN ORDER TO ENHANCE ARTICULATION BETWEEN ALL TYPES OF NURSING EDUCATION PROGRAMS AND IN ORDER TO ACHIEVE EDUCATIONAL MOBILITY, THAT:

- A. THERE BE INCREASED OPPORTUNITIES FOR MOBILITY FROM PRACTICAL TO REGISTERED NURSE BY INCREASING THE AVAILABILITY OF "LADDER CONCEPT" NURSING PROGRAMS WITHIN CURRENTLY OPERATING INSTITUTIONS;

- B. EFFORTS BE INTENSIFIED TO ENABLE GRADUATES OF ASSOCIATE DEGREE AND DIPLOMA PROGRAMS TO COMPLETE BACCALAUREATE DEGREES WITH A MINIMUM EXPENDITURE OF TIME AND A MINIMUM OF REPETITIOUS CONTENT;
- C. NURSING EDUCATION PROGRAMS EXPLORE THE USE OF MODULAR UNITS WITHIN COURSES, ENABLING STUDENTS TO STUDY ONLY THOSE PORTIONS OF EACH COURSE WHICH CONTAIN KNOWLEDGE OR SKILLS NEW TO THEM;
- D. IMMEDIATE ATTENTION BE GIVEN TO THE DEVELOPMENT OF TOOLS AND PROCEDURES TO MEASURE COMPETENCY-BASED KNOWLEDGE, SKILLS AND ATTITUDES AT ALL LEVELS OF PRACTICE IN ORDER TO AID IN THE APPROPRIATE ADVANCED PLACEMENT OF NURSES SEEKING ADDITIONAL FORMAL EDUCATION;
AND
- E. THE IOWA BOARD OF NURSING INVESTIGATE AND ACTIVELY PURSUE THE ESTABLISHMENT OF AN "EXTERNAL DEGREE" PROGRAM IN THE STATE.

Full credit for competency previously acquired, and assurance that the time required to complete a program will be as short as possible, would operate as incentives for nurses to seek additional formal education. Many education programs are making efforts to ease articulation problems, but barriers remain.

The establishment of an "external degree" program would recognize the fact that learning can occur in informal settings, and would accommodate nurses who cannot participate in educational programs.

11. The Commission recommends THAT EFFECTIVE IN 1976 THE LICENSURE PERIOD FOR NURSES BE CHANGED FROM THE PRESENT ONE YEAR TO A THREE YEAR CYCLE, WITH ONE-THIRD OF THE NURSE POPULATION RENEWING EACH YEAR.

Such a procedure would decrease the annual work load of the Iowa Board of Nursing staff, facilitate the supervision of the relicensure process, and allow for the additional record keeping which would be generated by new continuing education requirements for relicensure.

So that future research will not be inhibited, the renewal dates must be rotated to insure that the individuals renewing licenses in any

given year form a statistically representative sample of the total nurse population.

12. The Commission recommends THAT EFFECTIVE IN 1978, THE STATE OF IOWA INSTITUTE A LICENSURE LAW REQUIRING THAT NURSES PARTICIPATE IN 40 CONTACT HOURS (4 CEUs) OF CONTINUING EDUCATION PROGRAMMING DURING THE THREE-YEAR LICENSURE PERIOD IN ORDER TO QUALIFY FOR RELICENSURE. THE COMMISSION RECOMMENDS THAT IN THE INTERIM:

- A. THE AGENCY TO ADMINISTER THE PROGRAM BE IDENTIFIED;
- B. AN ADEQUATE SYSTEM OF CONTINUING EDUCATION PROGRAMS BE ESTABLISHED TO GUARANTEE ACCESSIBILITY AND QUALITY CONTENT; AND
- C. THE ISSUE OF STANDARDIZATION OF CEUs BE RESOLVED.

The following timetable would enable the carrying out of the recommendations:

- 1975 - Report of the Governor's Commission to Study Nursing in Iowa.
- 1975 - Establishment of the network for delivery, establishment of the administrative agency, and standardization of terms. Start of the three-year licensure program.
- 1978 - Institution of the continuing education re-licensure program. Start of the first three-year base period.
- 1981 - First year of mandatory continuing education requirement for re-licensure, upon continuing education credits accumulated during the 1978-1981 base period.
- 1982 - Relicensing of one-third of the nursing population.
- 1983 - Relicensing based upon 1980 to 1983 base period of accumulation of continuing education credits.
- 1984 - Goal for entire population of nurses are now licensed based upon continuing education requirements.

The nursing profession must provide leadership to assure competency in nursing practice; continuing education is one helpful tool in this effort. This study has shown that under the voluntary system many nurses do not participate in continuing education programs. The above schedule allows adequate time for a gradual transition and for careful planning and implementation.

13. The Commission recommends THAT THE IOWA BOARD OF NURSING ACCREDIT AGENCIES, INSTITUTIONS AND ORGANIZATIONS TO OFFER PROGRAMS QUALIFYING FOR CONTINUING EDUCATION UNIT CREDIT, RATHER THAN ACCREDITING INDIVIDUAL PROGRAMS, SEMINARS AND WORKSHOPS.

This method would be an efficient way to ensure high quality continuing education programming.

14. The Commission recommends THAT EVALUATION OF COMPETENCIES OF NURSES, BY PEERS, BE ENCOURAGED AND EXPANDED BY METHODS SUCH AS CERTIFICATION PROGRAMS OR ACADEMIES; AND THAT SALARY, STATUS AND PROMOTION BE BASED ON EXHIBITED COMPETENCIES.

All nurses should be assured that the people evaluating them have knowledge and experience in their area of practice. Avenues of career mobility from one level to the next higher level should be readily accessible to all nursing personnel who are appropriately competent: academic preparation and tenure alone are not adequate measures by which to make promotions, establish pay or assign job responsibilities.

15. The Commission recommends THAT EMPLOYERS GIVE LIKE CONSIDERATION, IN TERMS OF MONETARY AND STATUS REWARDS, TO NURSES FOR PERFORMANCE OF COMPARABLE QUALITY, WHETHER IT BE AT THE BEDSIDE, PRACTICING A CLINICAL SPECIALTY, CARRYING OUT ADMINISTRATIVE DUTIES, OR TEACHING.

A serious problem which stifles nurses in the attempt to use their ability to the fullest is the tendency for monetary reward and, in

some cases, professional status, to be disproportionately reserved for administrative nurses. Obstacles are faced by nurses who take their careers seriously and are able to function in the "unprogrammed" area of knowledge and skill, but who strongly prefer clinical work with direct patient contact. Too often each promotion moves a nurse still further from patients. There is a need for two separate routes by which a nurse might seek promotion: the clinical route and the administrative route. The nurse should be able to choose either route without penalty, and there should be mobility between the routes, so that during a career, an individual may seek expertise in several areas.

16. The Commission recommends THAT THE IOWA BOARD OF NURSING RECEIVE ADEQUATE STAFF SUPPORT AND FUNDING TO ELIMINATE OUTDATED RECORD FILES, INSURE ACCURATE AND UNIFORM DATA COLLECTION AND REPORTING, AND EXPAND THE COLLECTION OF DATA--WITH PRIORITY GIVEN TO EXPANDING DATA RELEVANT TO LICENSED PRACTICAL NURSES.

There is a general lack of reliable data relevant to nursing in Iowa. Two Iowa Board of Nursing functions, relicensure mailings and the filing of annual reports by education programs, provide excellent vehicles for the collection of additional data, but adequate measures to insure that information is uniform, accurate and in usable form will require funding and staff.

License renewal forms, standardized nationwide, at present collect limited data regarding licensed practical nurses. The forms should be supplemented.

17. The Commission recommends THAT THE PROPOSED RESEARCH AND DEVELOPMENT ORGANIZATION DEVELOP A GLOSSARY OF NOMENCLATURE APPLICABLE TO THE FIELD OF NURSING.

Confusion results from the lack of clarity with which nursing terminology is used, particularly regarding nursing practice.

18. The Commission recommends THAT THE PROPOSED RESEARCH AND DEVELOPMENT ORGANIZATION CONDUCT AN IN-DEPTH STUDY TO DETERMINE THE LEVEL OF SATISFACTION AMONG NEW GRADUATES, EMPLOYERS, AND CONSUMERS; AND THAT NURSING EDUCATION CURRICULA AND/OR CONSUMER AND EMPLOYER EXPECTATIONS BE MODIFIED IN LIGHT OF THE FINDINGS.

A major concern is that often the nursing curricula are not totally relevant to actual nursing practice, and that employers' expectations, manifested in nursing job responsibilities, do not always properly take into account nurses' preparation. Appropriate changes in nursing education and in practice need to occur simultaneously.

19. The Commission recommends THAT PROFESSIONAL ORGANIZATIONS SUCH AS THE IOWA FEDERATION OF LICENSED PRACTICAL NURSES AND THE IOWA NURSES' ASSOCIATION, OR OTHER APPROPRIATE GROUPS, UNDERTAKE ACTIVITIES TO FURTHER DEFINE THE LEVELS AND CLARIFY THE IMAGE OF NURSING AND NURSES FOR VARIOUS AUDIENCES.

The image of the nurse which is held by the nursing profession differs from that held by others in the health care field and by the general public. This creates problems in designing educational programs, and in effectively utilizing the knowledge and skills of nurses.

APPENDIX A

Commission Survey Questionnaire
and
Iowa Board of Nursing License Renewal Form Questions

COMMISSION TO STUDY NURSING IN IOWA

OAKDALE HOSPITAL
OAKDALE, IOWA 52319
PHONE (319) 353-6967

The Honorable
Robert D. Ray, Governor,
State of Iowa

February, 1974

Commissioners:

Jane Alexander

LaNelle Bentz, R.N.

Sister James Marie Donahue, RSM, R.N.

Mildred Freel, R.N.

Gwendolyn Hickey, L.P.N.

Elizabeth Kerr, R.N.

Patricia Klopfenstein

The Honorable Joan Lipsky

Geraldine Mahnke, R.N.

Suzanne Mains, R.N.

John McDonough

Phyllis Peters, R.N.

Kathleen Sauer

Lawrence Staples, M.D.

Dear R.N.*:

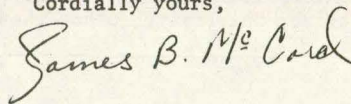
Your help is needed. As you may already know, Governor Ray recently appointed a 15-member "Commission to Study Nursing in Iowa". This 18-month study will focus on three main areas of nursing, including (preparatory) Education, Practice, and Continuing Education, and will culminate in projections and recommendations for nursing and the improvement of nursing care for Iowans.

A variety of information sources and data-gathering procedures have been planned, but certain information can best come from the nurse directly. The brief questionnaire on the reverse side of this page will serve this purpose, and you can record your feelings by simply checking boxes. Your licensure number is necessary because it will allow us to "call up" information on your license renewal card (via the computer) and combine or correlate that data with the information gathered on this questionnaire. However, the purpose of this study is not to evaluate individual nurses and your identity will be protected. Your honest, sincere feelings are needed.

We will begin compiling data March 31, so please record your answers and return this letter to the Director at your earliest convenience. The Commission is scheduled to make its final report to the Governor in February, 1975.

Thanking you in advance for your help, I remain

Cordially yours,



James B. McCord, Director
Commission to Study Nursing in Iowa
Oakdale Hospital
Oakdale, Iowa 52319

JMBC/kmb

*Same questionnaire sent to LPN



Please check () or fill in the information below.

1. Your license number (as issued by the Iowa Board of Nursing): _____
2. Year graduated from (initial) preparatory education program: 19____
3. Number of years of full-time (30 or more hrs/wk) practice since graduation: ____ years
4. Have you acquired a higher degree since graduation from the basic nursing preparation program? (1) ____ yes (2) ____ no
5. Are you currently working towards a degree to the extent of at least 3 semester hours enrollment? (1) ____ yes (2) ____ no
 - (a) If yes, towards which degree? (check one)

(1) ____ Asso. Degree in Nursing	(5) ____ Masters in Nursing
(2) ____ Asso. Degree in other field	(6) ____ Masters in other field
(3) ____ Bacc. Degree in Nursing	(7) ____ Doctorate
(4) ____ Bacc. Degree in other field	Field: _____
6. Please check the blank below indicating your average monthly salary for 1974.

(1) ____ 0-\$299	(3) ____ \$500-699	(5) ____ \$900-1,099	(7) ____ \$1,300 or over
(2) ____ \$300-499	(4) ____ \$700-899	(6) ____ \$1,100-1,299	
7. Does your employer offer in-service training? (1) ____ yes (2) ____ no
 - (a) If yes, do you feel it meets your continuing education needs? (1) ____ yes (2) ____ no
 - (b) If yes, is participation required for employment? (1) ____ yes (2) ____ no
 - (1) If participation is required, is work-release time provided?

(1) ____ yes	(2) ____ no	(3) ____ Not Applicable
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 - (2) If participation is required but the in-service training is offered during (your) non-work time, are you paid accordingly or given equivalent time off?

(1) ____ yes	(2) ____ no	(3) ____ Not Applicable
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The following definition of Continuing Education is lifted from the National Task Force Statement on the Continuing Education Unit (CEU): "...AN ORGANIZED (CONTINUING EDUCATION) EXPERIENCE UNDER RESPONSIBLE SPONSORSHIP, CAPABLE DIRECTION, AND QUALIFIED INSTRUCTION." The Task Force concluded that in-service training sessions do not meet this definition. However, coursework toward a degree (or diploma) will be interpreted as meeting the above definition.

8. Based on the above definition, please indicated the extent of your participation in Continuing Education during 1973 and then itemize your total hours by sponsor in 8a below.

<u>HOURS OF PARTICIPATION:</u> (1) ____ none	(3) ____ 10-19 hrs.	(5) ____ 40-59 hrs.
(2) ____ 1-9 hrs.	(4) ____ 20-39 hrs.	(6) ____ 60 hrs. or more

8a.	<u>SPONSOR</u>	<u>NO. OF CONTACT HOURS</u>
(1)	Iowa Board of Nursing.....	_____
(2)	Health Occupations Education.....	_____
(3)	Iowa Nurses' Association.....	_____
(4)	Iowa Citizens League for Nursing.....	_____
(5)	Iowa Licensed Practical Nurse Association.....	_____
(6)	Iowa Hospital Association.....	_____
(7)	The University of Iowa.....	_____
(8)	College or University (other than U. of I.).....	_____
(9)	Other: _____	_____
		<u>TOTAL</u> (should equal #8 above)

9. Do you think the voluntary continuing education concept has worked for Iowa nurses?

(1) ____ yes	(2) ____ no
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10. If continuing education (as defined above) were required for relicensure to the extent of 50 contact hours per year, would you drop your Iowa license?

(1) ____ yes	(2) ____ no	(3) ____ undecided
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The Commission encourages you to include comments, concerns, or suggestions for "areas to be studied" when returning this questionnaire (see reverse side for return address).

Thank you

APPENDIX B

Questionnaire Distributed to Administrators
of Iowa Nursing Programs

Governor's Commission to Study Nursing in Iowa

Please return to: Irene Talbott, Office for Planning and Programming,
523 E. 12th Street, Des Moines, IA 50319

1. What is the average student to nursing faculty ratio for your program

_____ in your classrooms?

_____ in your clinical facilities?

2. How many applications for admission did you have to reject in 1974 because they could not be accommodated by your present size facility and faculty?

3. Do you have an upper limit on the number of students you can admit?

_____ yes _____ no

If so, what is the basis for this limit (DPI regulations, financial constraints, etc.)

4. Without changing your present clinical and classroom facilities or faculty, how many MORE students could you admit into your program in 5 years?

_____ (If you are operating at full capacity now, please enter 0).

5. If your program wanted to expand, what factor would limit you the most (be difficult to expand)?

_____ classroom space _____ faculty _____ clinical facilities
_____ number of applicants for admission

6. Taking into account any changes you are planning in your program and any trends you perceive in student applications, what is the total number of students you actually expect to be accommodating in 1980?

7. If your program plans to expand its student capacity by 1980, when, how and to what extent will expansions be made?

_____ No expansions planned
_____ year in which expansion will be completed
_____ number of additional students to be accommodated
_____ number of additional classrooms
_____ number of additional faculty members
_____ number of additional course offerings
expansion of clinical facilities? _____ Yes _____ No

8. We welcome your comments on the nature of planned expansion or on your perceptions of nursing education facility needs in the next 5 years:

9. If your program plans to decrease or cut back your program to accommodate fewer students over the next 5 years, how many fewer students will you be admitting? _____

We are interested in determining policies for granting credit to applicants for admission who have previous nursing schooling or nursing experience.

Regarding applications for admission from students who had some nursing schooling 10-15 years ago, but did not then complete the course of study:

_____ how many such students have applied to you in the last 5 years?

Is your policy: (check as many as appropriate)

_____ to grant a pre-determined and uniform amount of credit to all such students? If so, how many hours of credit is granted? _____

_____ to grant no credit, but to admit them as you would any beginning student?

_____ grant credit for courses completed, after evaluating individually to ensure they are equivalent to courses in your program?

_____ to allow students to "challenge" or "test out" of courses using standardized tests to evaluate their competency?

_____ to allow students to "challenge" courses using your own teacher-made tests?

If you allow students to "test out of courses", what is the limit (if any) on the number of credits or courses students may omit in this way? _____
If you set no formal limit, what is the usual or average number of credit hours students "test out"? _____ credit hours. What is the average length of time most students entering under these conditions spend to complete your program? _____

We invite your comments regarding opportunities or problems students with previous nursing training or experience face as they attempt to complete additional nursing education in your program.

APPENDIX C

Questionnaire Distributed to Faculty Members
of Iowa Nursing Programs

From: Governor's Commission to Study Nursing in Iowa
Irene Talbott, Project Director

Faculty Members in Nursing Education Programs

1. Type of program in which you teach: LPN Associate Degree
 Diploma Bacc.
2. Please check the degrees you hold, including your basic training as well as any further degrees.
 LPN Associate Degree Diploma School Bacc.
 Masters in Nursing Masters in other field PHD in Nursing
 PHD in other field
3. How many years of experience do you have in teaching nursing (including the current academic year)? _____
4. How many years (including this one) have you taught at this institution? _____
5. In your present job assignment, what is the approximate percentage of your effort spent in each type of duty?
 Classroom Teaching Clinical teaching or supervision
 Research Practice of nursing other than teaching
 Administrative duties for the school of nursing
 Administrative duties for Nursing Service Department
6. Are you employed: full-time part-time (less than 30 hours per week?)
7. Does (or would) a job combining some teaching with some research, practice and/or administration duties appeal to you?
 Yes No
8. During your formal education, how many credit hours of coursework did you complete in education courses (how-to-teach courses from a Department of Education)?
 semester hours quarter hours

Thank you for your cooperation. Please return this form to your Director, so that all faculty forms from your school may be returned to us together.

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