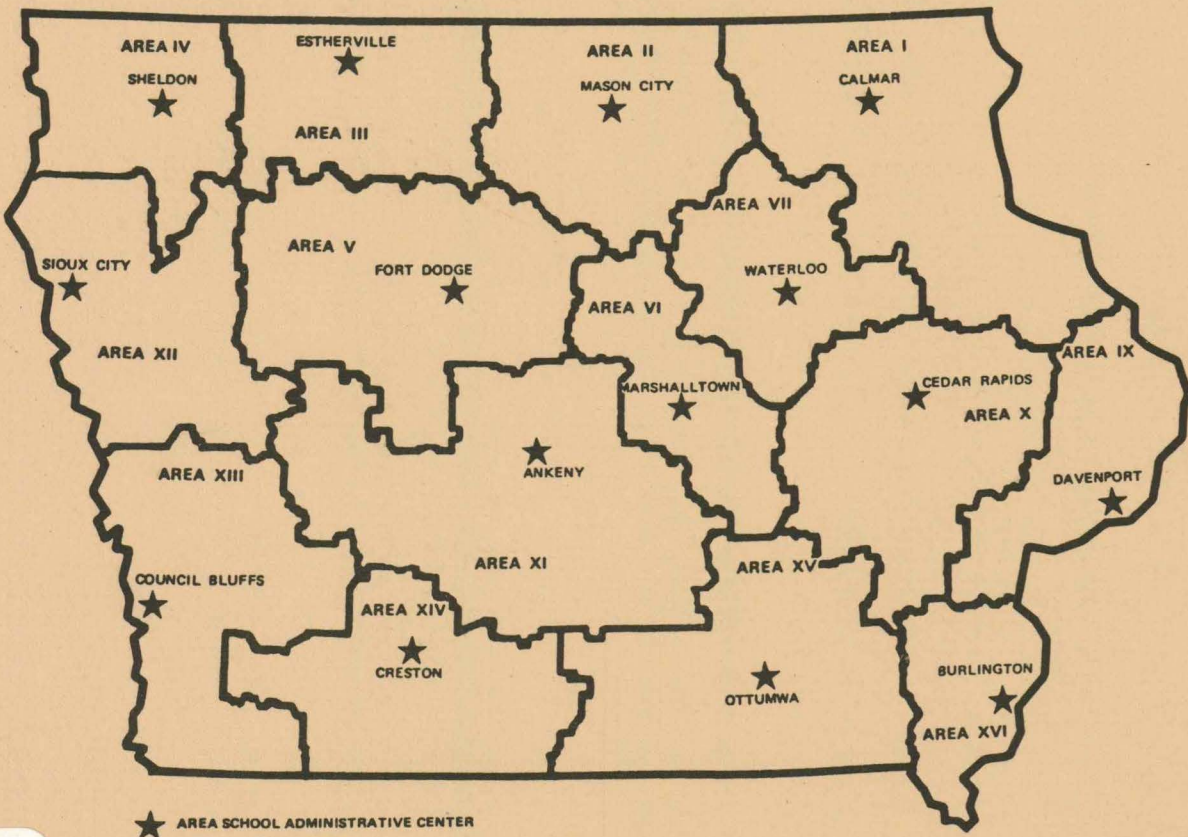


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Medical Personnel - Education

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



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1979

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

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

FOR LOCATIONS OF ALL ONE- AND TWO-YEAR
PREPARATORY PROGRAMS, SEE APPENDIX I.

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

AN OVERVIEW OF HEALTH OCCUPATIONS EDUCATION
IN THE PUBLIC EDUCATION SYSTEM OF IOWA - 1979

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

in cooperation with

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

Chester S. Rzonca, Director
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Dale F. Petersen
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Updated Annually

INTRODUCTION

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

Further, it is recognized that:

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

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

DEFINITION OF HEALTH OCCUPATIONS EDUCATION

Health occupations education is an integral part of the total field of education. It prepares health workers for employment in positions supportive to health professionals but not requiring a baccalaureate degree, provides continuing education opportunities for health care personnel, and offers classes in health maintenance for consumers of health care.

IOWA'S ORGANIZATIONAL STRUCTURE
FOR HEALTH OCCUPATIONS EDUCATION
WITHIN VOCATIONAL-TECHNICAL EDUCATION

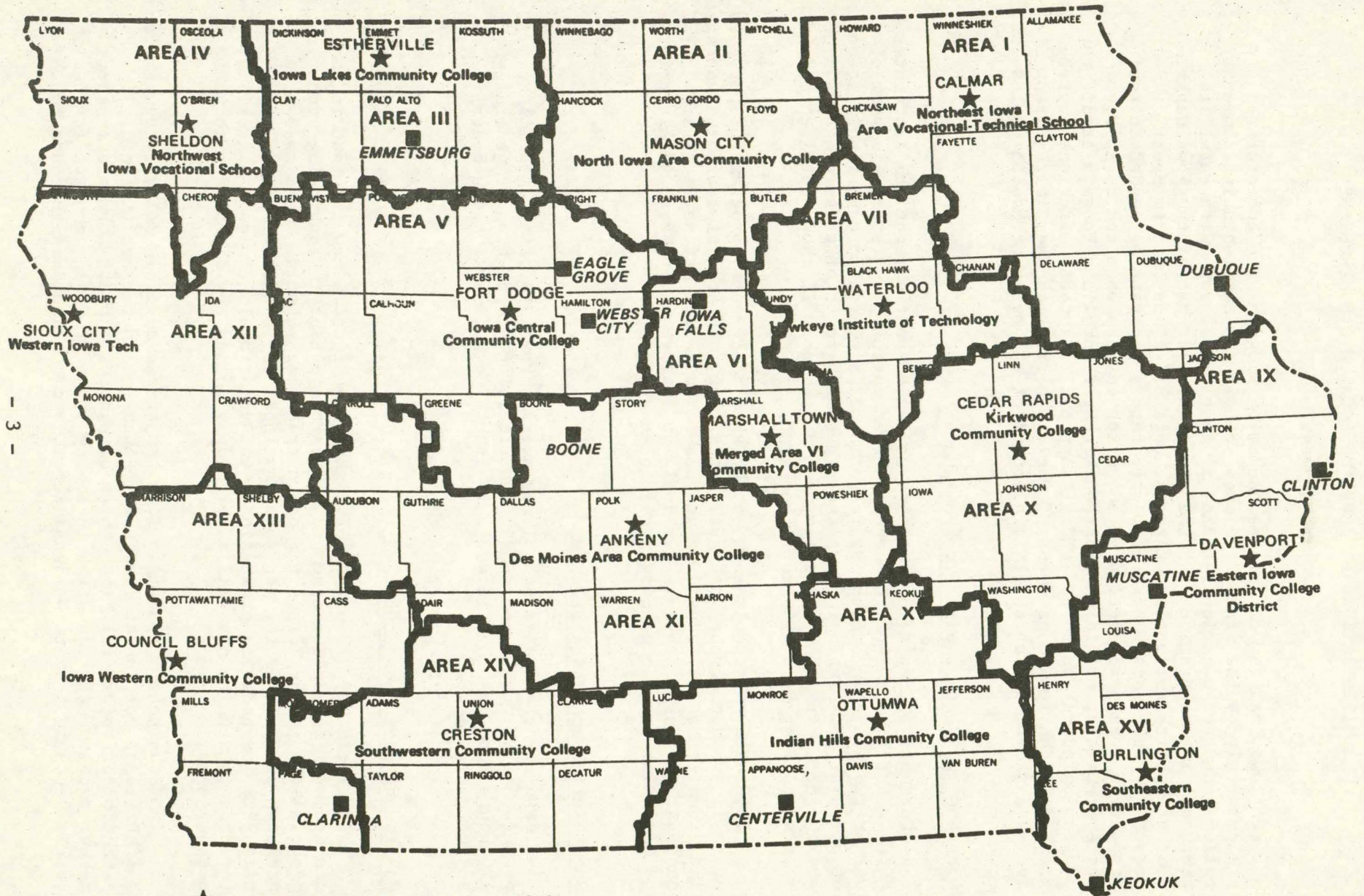
Through contractual agreements reviewed and renewed annually, The University of Iowa Program in Health Occupations Education; through its professional staff members; serves the Career Education Division, Area School Branch, Iowa Department of Public Instruction to provide statewide leadership in health occupations in the areas of: (1) consultant and advisory services, (2) professional development (teacher education), (3) research, and (4) curriculum and instructional materials development. This cooperative arrangement, requested by the Iowa Department of Public Instruction, and with the interest of The University of Iowa, has continued since 1958. The Program in Health Occupations Education; designated as the organized unit through which the provisions of the contracts are carried out; is an integral department of the University, administered under its Associate Dean of the Faculties.

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

- 1) assisting personnel in Iowa's 15 merged area schools (13 community colleges and two vocational-technical institutes) as they plan, implement, evaluate and revise their preparatory, inservice, and adult and continuing education programs in health occupations education and community education;
- 2) assisting secondary school personnel as they develop health career orientation, exploratory and aide-level programs;
- 3) abetting innovative and new approaches to the preparation of health care workers;
- 4) upgrading skills of teachers in health occupations education through preservice, inservice, and on- and off-campus offerings; and,
- 5) stimulating the collaboration of efforts among the various educational, professional, service and governmental groups interested in the education of health workers who function in roles supportive to health professionals.

The two contracting agencies believe that mutual benefits are derived from having consultative and teacher education personnel for health occupations education located at The University of Iowa. The geographic proximity of the Program in Health Occupations Education to the University's Hospitals and Clinics, Professional Health Colleges, College of Education, Extension Division, and Health Services Research Center provides both opportunity for interaction among professionals in these areas and ready access to other supportive and needed resources. Through such sharing, opportunities for articulation between the levels of preparation for health workers (autonomous, professional, allied professional, and vocational-technical) can be explored and pursued as feasible.

MERGED AREA SCHOOLS



★ ADMINISTRATIVE CENTER AND CAMPUS

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

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

In Iowa, health occupations education programs are administered predominately by the State's 15 area schools (13 comprehensive community colleges and two vocational-technical institutes, some with satellite campuses) in cooperation with the Area School Branch of the Iowa Department of Public Instruction. Area schools offer one- and two-year preparatory programs; short-term preparatory programs as needed in their respective area; and continuing education courses when and as approved and appropriate, providing opportunities for enrollees to gain credit for continuing education units (CEUs). Approval for these offerings must be granted by the Iowa Department of Public Instruction and, if required and as appropriate, by an official board of the relevant health profession.

One- and Two-Year Preparatory Programs

Currently, Iowa's 13 community colleges and two technical institutes offer a total of 90 health occupations education preparatory programs of one or two years in length, representing 22 different occupational categories of preparation. Table I shows the types and growth of these programs since 1957. For their location, see Appendix I. Table II shows total enrollments (women and men) from 1959 to the present.

Several area schools have established a pre-entry program for purposes of: (1) evaluating the interest, motivation, and abilities of disadvantaged individuals; and (2) providing what basic education and services are necessary to assist these individuals to improve their basic skills prior to admission into an ongoing preparatory program.

Short-Term Preparatory Programs

As needed, any area school may seek approval to offer programs to prepare health workers for positions requiring preparation of generally 120 hours but less than 12 weeks in length, e.g., nurse aides-orderlies and ward clerks.

Continuing Education Courses

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

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

TABLE I

HEALTH OCCUPATIONS EDUCATION IN IOWA

GROWTH OF ONE- AND TWO-YEAR PREPARATORY
PROGRAMS, BY TYPE—FY's 1957-1980

Practical Nursing*	2	3	4	4	5	5	8	11	11	13	19	19	19	20	23	23	23	23	24	24	24	24	24	25
Medical Office Assistant									1	1	1	5	5	5	5	6	7	7	7	7	7	7	7	7
Medical Lab Assistant									1	1	3	4	4	4	4	4	4	4	4	3	3	3	3	3
Dental Assistant											4	6	6	7	7	7	8	8	8	8	8	8	8	8
Associate Deg. in Nursing											2	2	5	8	9	12	13	14	14	14	14	14	16	18
Operating Room Technician**											1	3	3	3	3	3	5	5	6	6	6	6	6	6
Dental Lab Technician												1	1	1	1	1	1	1	1	1	1	1	1	1
Environmental Assistant												1	1	1	1	1	1	1	1	1	1	1	1	1
Occupational Therapy Assist.												1	1	1	1	1	1	1	1	1	1	1	1	1
Orthopaedic Physicians Assist.												1	1	1	1	1	1	1	1	1	1	1	1	1
Health Care Facilities Admin.														1	1	1	1	1	1	1	1	1	1	1
Respiratory Therapy																1	2	2	2	2	2	2	2	2
Medical Lab Technician																	1	1	1	1	1	1	1	1
Environmental Technician																	1	1	1	1	1	1	1	1
Dental Hygiene																		1	2	2	2	2	2	2
Water—Waste Water Technology																		1	1	1	1	1	1	1
Respiratory Therapy Tech.																			2	2	2	4	4	4
Radiographer																				1	1	1	1	2
Optometric Assist.																					1	1	1	1
Electroencephalographic Tech.																						1	1	1
Medical Records Technician																							1	2
Interpreter Training																								1
TOTAL NUMBER	2	3	4	4	5	5	8	11	12	15	21	34	43	47	55	56	62	70	74	77	78	79	84	90
FY (19)	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80

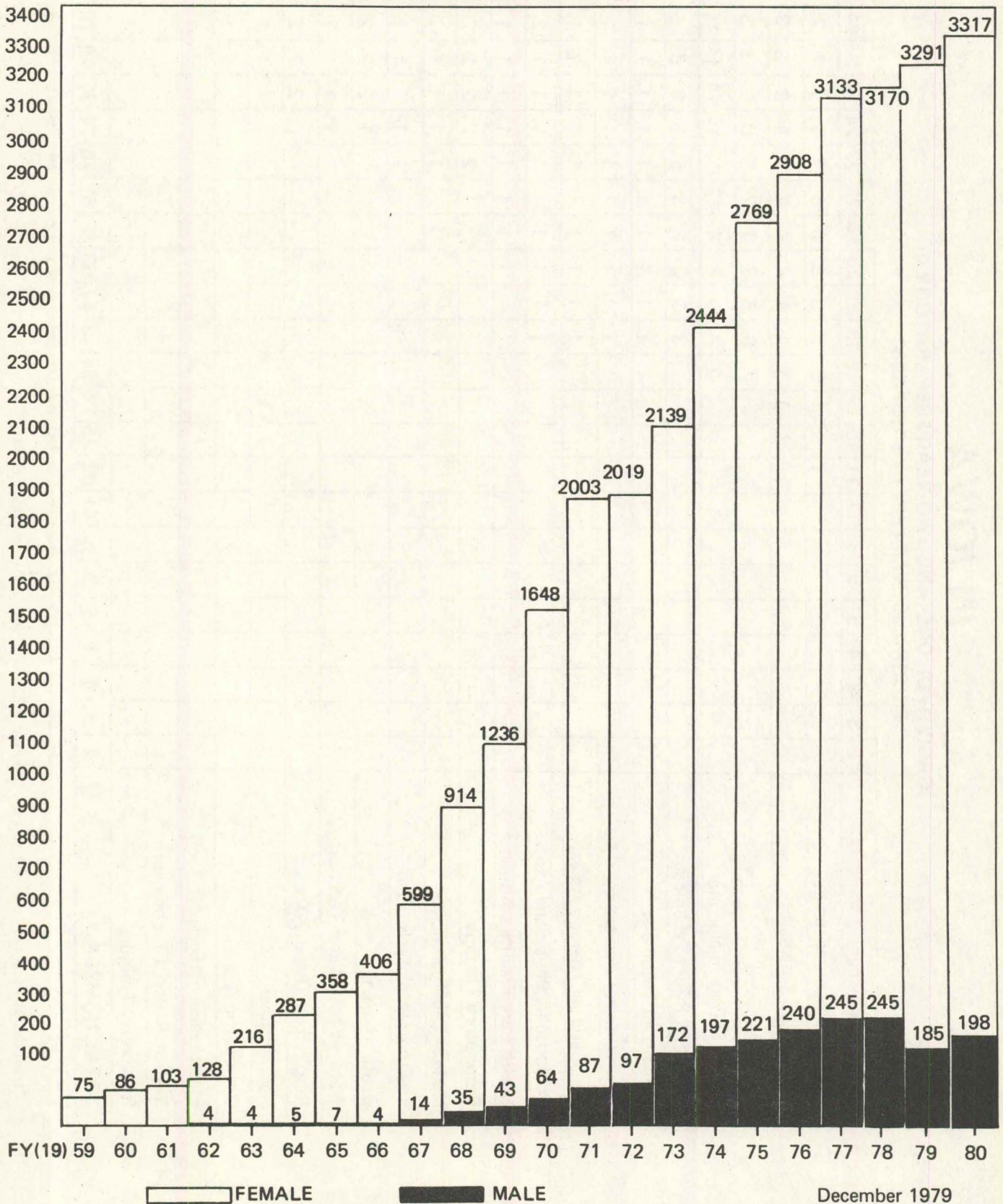
*Includes one secondary-level two-year program at Des Moines Technical High School.

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

December 1979

TABLE II
**HEALTH OCCUPATIONS EDUCATION
 IN IOWA**

ONE- AND TWO-YEAR PREPARATORY PROGRAM
 ENROLLMENTS FY 1959-1980



December 1979

Each area school employs at least one coordinator who serves as liaison between the school and its community in arranging offerings for employed health workers seeking retraining or upgrading of skills (supplemental courses), and for consumers of health care.

As needed and determined appropriate, area schools may offer other short-term courses such as those which prepare medicine aides. Because of the nature of these courses, the cooperation of other agencies and/or official health boards is sought; e.g., the Iowa Department of Health and the Iowa Board of Nursing.

Secondary Programs

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

Recognition of Achievement in Programs and Courses

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

TABLE III

ENROLLMENTS FY 1979 BY PROGRAM CATEGORY

Type of Program	Number Programs Offered	Enrollees
1. One-and two-year Preparatory Programs	90	3,317
2. Short-term Preparatory Programs:		
a. Nurse Aide-Orderly	120	1,416
b. Ward Clerk	6	50
3. Continuing Education Courses		
a. Supplemental	3,485	65,096
b. Consumer	Figures not currently available for FY 1979	

Follow-Up of Program Graduates

Data available from the annual follow-up studies conducted by the Iowa Department of Public Instruction for 1978 indicate that 2,600 students completed health occupations education programs at the secondary level and post-secondary level.

From this group, 1,917 were available for employment. Follow-up data indicate that 92.2% were employed in the occupation for which they were prepared or in a closely related occupation. In addition 3.7% were employed, but in non-related occupations. Only 4.1% were unemployed at the time of the study. Table IV provides more detailed information describing the employment of secondary and post-secondary graduates.

TABLE IV

Health Occupations Education
Placement Statistics*
FY 1978 Completers One Year Later

Statewide - All Health Occupations Education

Total number of completers	2,600	
Number continuing their education	222	
Number status unknown	371	
Other	90	
	<hr/>	
Number available for employment	1,917	
Number employed in related occupation	1,768	92.2%
Average weekly wage	\$170.89	
Number employed in non-related occupation	71	3.7%
Number unemployed	78	4.1%
Employed in-state	1,656	
Employed out-of-state	183	

Statewide - Post Secondary Only

Total number of completers	2,307	
Number continuing their education	106	
Number status unknown	339	
Other	75	
	<hr/>	
Number available for employment	1,787	
Number employed in related occupation	1,676	93.7%
Average weekly wage	\$172.19	
Number employed in non-related occupation	39	2.2%
Number unemployed	72	4.0%
Employed in-state	1,542	
Employed out-of-state	173	

Statewide - Secondary Only

Total number of completers	293	
Number continuing their education	116	
Number status unknown	32	
Other	15	
	<hr/>	
Number available for employment	130	
Number employed in related occupation	92	70.7%
Average weekly wage	\$143.72	
Number employed in non-related occupation	32	24.6%
Number unemployed	6	4.6%
Number employed in-state	114	
Number employed out-of-state	10	

*Source: Annual Vocational Education Follow-Up Study, Guidance Division,
Iowa Department of Public Instruction

PERSONNEL DEVELOPMENT AND TEACHER EDUCATION
FOR HEALTH OCCUPATIONS EDUCATION ADMINISTRATORS AND INSTRUCTORS

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

Faculty Members in Local HOE Programs

Totally, 371 (263 full-time and 108 part-time) instructional personnel are employed for the one- and two-year preparatory programs. In addition to these there are the many instructors who taught in the aforementioned continuing education courses. All instructional personnel must have had experience as practitioners in the field in which they are teaching and meet the necessary teacher-certification requirements of the Iowa Department of Public Instruction.

Conferences and Workshops

Annually, each spring and fall the professional staff of the Program provides leadership for a planned Conference for HOE Teachers in Iowa. These annual conferences are co-sponsored by the Program in Health Occupations Education, Iowa Department of Public Instruction, and the Health Occupations Education Division of the Iowa Vocational Association.

Topics have ranged from core curricular and interdisciplinary approaches to learning styles and personality inventories. Also, the Program has cooperated with the Iowa Health Occupations Education Division to offer a number of Leadership Development Workshops for health occupations education personnel in the Division as well as for local program coordinators and department chairpersons.

In addition to these non-credit offerings, credit courses are provided in various regions of the State on an interest and need basis to enable instructors to meet Career Education Approval and Certification Requirements. These courses are typically offered in a workshop format and include areas in educational methodology such as teaching methods, student evaluation, curriculum development and historical and philosophical considerations in vocational and health occupations education.

Undergraduate and Graduate Degree Opportunities Offered by The University of Iowa

The Program in Health Occupations Education also has had an active role in developing and staffing the University's baccalaureate program in Health Occupations Education offered by The University of Iowa's Colleges of Liberal Arts and Education. This program requires that the applicant has completed a health specialty and that he/she is registered, certified, or licensed to practice this specialty prior to acceptance into the major. While the program is flexibly planned, it requires that students complete basic skills and core requirements of the Colleges of Liberal Arts, a 30-hour education major, and 10 hours of advanced specialization which may be achieved either in the basic sciences, offerings by a specific health college at the University, or additional hours in education.

Graduate level programs are currently administered by the College of Education's Division of Instruction Design with an option for specialization in health careers education. In addition, persons interested in working for an advanced degree (MA, EdS, PhD) avail themselves of program opportunities offered in other divisions in the College of Education, (e.g., Post-Secondary and Continuing Education, Educational Administration, etc.).

BRIEF DESCRIPTION OF PREPARATORY HEALTH OCCUPATIONS
PROGRAMS PRESENTLY OFFERED IN IOWA

ONE- AND TWO-YEAR PROGRAMS

1. Associate Degree Nurse

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

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

2. Dental Assistant

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

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

3. Dental Hygienist

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

4. Dental Laboratory Technician

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

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

5. Electroencephalographic Technologist

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

6. Environmental Health Assistant

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

7. Environmental Health Technician

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

8. Health Care Administrator

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

9. Interpreter Training Program (Deaf)

A major objective of the ITP is to produce interpreters expressively and receptively fluent in manual communication. The two-year

18. Practical Nurse

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

19. Radiologic Technologist

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

20. Respiratory Therapist

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

21. Respiratory Therapy Technician

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

22. Water and Wastewater Technician

The Water and Wastewater Technology program is based on a four-quarter schedule and features two areas of study for students interested in the field of environmental control. Drinking water treatment and distribution is one area. The other is wastewater treatment and collection, including both industrial and domestic wastewater.

SHORT TERM PREPARATORY PROGRAMS

Nurse Aide-Orderly

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

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

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

Ward Clerk or Unit Secretary

This 150-hour preparatory course is designed to prepare guidelines to function as unit receptionists in hospitals or nursing homes. They assist the nursing staff with the many clerical and non-professional duties required in the management of the unit. Formal classroom instruction is correlated with clinical experience.

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

FY 1980

PROGRAMS	AREA SCHOOLS																TOTALS													
	I		II		III		V		VI		VII		IX		XI			XII		XIII		XIV		XV		XVI				
	N.E. Ia. Technical Institute		North Iowa Area Community College		Iowa Lakes Community College		Iowa Central Community College		Iowa Valley Community College District		Hawkeye Institute of Technology		Eastern Iowa Community College District		Des Moines Area Community College		Western Iowa Tech. Comm. College		Iowa Western Community College		Southwestern Community College		Indian Hills Community College		Southeastern Iowa Community College					
	Calmar	Peosta	Mason City	Estherville	Emmetsburg	Storm Lake	Marshalltown	Waterloo	Davenport	Bettendorf	Clinton	Cedar Rapids	Ankeny	Boone	Carroll	Cherokee	Harlan	Clarinda	Atlantic	Creston	Ottumwa	Centerville	W. Burlington	Keokuk						
Associate Degree Nurse	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x					x		x	x		18				
Dental Assistant		x				x	x	x				x	x		x												8			
Dental Hygiene													x														2			
Dental Laboratory Technician												x															1			
Electroencephalographic Tech.												x															1			
Environmental Health Assistant												x															1			
Environmental Health Tech.												x															1			
Health Care Facility Admin.													x														1			
Interpreter Training																				x							1			
Medical Laboratory Assistant											x		x														3			
Medical Laboratory Technician													x														1			
Medical Office Assistant			x			x		x				x	x							x					x		7			
Medical Records Technician												x										x					2			
Occupational Therapy Assistant												x															1			
Optometric Assistant			x																								1			
Operating Room Technician									x		x	x				x				x							6			
Orthopaedic Physician's Assistant												x															1			
Practical Nurse	x*	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	25			
Radiographer											x																2			
Respiratory Therapy												x	x														2			
Respiratory Therapy Technician			x						x	x		x															4			
Water—Waste Water Technician													x														1			
TOTALS	1	2	4	4	0	2	4	2	5	6	0	6	2	15	10	2	1	4	1	6	1	1	1	1	1	4	1	3	1	90

Notes: 1. Administrative Center of area schools in bold letters.
 2. X indicates an existing program.

*One Practical Nurse program is administered by Des Moines Technical High School.

APPENDIX II

Addresses of Local Area School
Health Occupations Education Programs

N.E. Vocational-Technical School 142 Main Street Calmar, Iowa 52132	Hawkeye Institute of Technology 1501 East Orange Road Waterloo, Iowa 50704
N.E. Vocational-Technical School R.R. 1 Peosta, Iowa 52068	Eastern Iowa Comm. College District 2804 Eastern Ave. Davenport, Iowa 52803
North Iowa Area Community College 500 College Drive Mason City, Iowa 50401	Scott Community College Belmont Road Bettendorf, Iowa 52722
Iowa Lakes Community College 101½ Sixth Street Estherville, Iowa 51334	Clinton Community College 1000 Lincoln Blvd. Clinton, Iowa 52732
Iowa Lakes Community College 3200 College Drive Emmetsburg, Iowa 50536	Kirkwood Community College 6301 Kirkwood Blvd., SW Cedar Rapids, Iowa 52406
Northwest Iowa Technical College Highway 18 West Sheldon, Iowa 51201	Des Moines Area Community College 2006 Ankeny Blvd. Ankeny, Iowa 50021
Iowa Central Community College 330 Avenue M Fort Dodge, Iowa 50501	Des Moines Area Community College 1125 Hancock Drive Boone, Iowa 50036
Iowa Central Community College Storm Lake, Iowa 50588	Des Moines Area Community College South Clark Street Carroll, Iowa 51401
Iowa Valley Comm. College District 22 West Main Street Marshalltown, Iowa 50158	Western Iowa Tech Comm. College 4647 Stone Avenue Sioux City, Iowa 51102
Marshalltown Community College 3700 South Center Marshalltown, Iowa 50158	Western Iowa Tech Comm. College 724 1st St. North Cherokee, Iowa 51012

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

Indian Hills Community College
Ottumwa Industrial Airport
Ottumwa, Iowa 52501

Iowa Western Community College
2712 12th St.
Harlan, Iowa 51537

Indian Hills Community College
North First Street
Centerville, Iowa 52544

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

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

Iowa Western Community College
906 Sunnyside Lane
Atlantic, Iowa 50022

Southeastern Community College
285 Messenger Road
Keokuk, Iowa 52632

Southwestern Community College
1501 Townline Street
Creston, Iowa 50801

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