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Health Occupations Education Profile: The Heartbeat of Pennsylvania

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HEALTH OCCUPATIONS EDUCATION PROFILE:

THE HEARTBEAT OF PENNSYLVANIA

Beverly Richards¹

Abstract: The purpose of this paper was to develop a profile of secondary health occupations education for the last five years. This profile on the heartbeat of Pennsylvania includes program enrollments by educational level, grade, gender, race, type of educational institution, special populations (handicapped and disadvantaged), number of completers, average salaries of completers, educational level of teachers, and average annual teacher salaries. By examining data for the past years, trends and issues become more apparent and provide a framework for setting future priorities.

The health care industry is the fastest growing industry in the United States. The current shortage of health care workers is building to crisis proportions and poses a serious threat to the ability of health care facilities to provide critical services to citizens. Some hospitals have been forced to close because of staff shortages.

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Factors exacerbating this situation include changing demographics, and scarce resources.

Staff shortages will not be eased by the traditional entry of young workers into the **field**, as demographic studies show that the number of young entry-level workers will decrease dramatically over the next seven years. The Pennsylvania Department of Education (1988-89) indicated that during the present decade, secondary school enrollments at the twelfth grade level have declined **by** 50,000 students, while enrollments in secondary vocational education have declined **by** 40,000. Similar projections are predicted into the mid-1990's. Compounding the problem of declining secondary enrollment is the increase in elderly population. Pennsylvania has one of the fastest growing populations of older adults in the nation. As the number of older adults grows, the need for qualified care givers also grows.

Traditionally, health occupations education programs have prepared individuals for work in the health care industry but there has been a declining interest in health care professions. These professions have been staffed by women but the 1970's began a period of great expansion in professional opportunities for women. In 1968, there were fewer than 2,000 female graduates in law, medicine, and business. In 1978, 20,000 women received such degrees, and by 1985, the annual total was more than 40,000. Young women who once were willing to work for low wages are no longer attracted to the health care field.

Historically, vocational education has been gender-typed by program area, similar to patterns found in the work place. Title IX of the Educational Amendments of 1972 and the 1976 Vocational Education Act amendments directed vocational educators to offer and emphasize

nontraditional programs based on gender. Efforts to increase enrollments in nontraditional programs have been mixed- From 1972 to 1982, Vetter and Hickey (1985) **reported** increases in numbers and percentages of female students in the traditional male vocational programs of agriculture, technology, and trade and industrial education, and increases in numbers and percentages of male students in the traditional female vocational programs of office and home economics. This did not hold true for health occupations education as the percentages of males dropped slightly from 15.3% to 15.2% during this time period. Similarly, Farmer, Sidney, Bitters, and Brizius (1985) found that gender typing has produced a high enrollment of females in training for the lower-paying occupations and a low enrollment of males in the caring and nurturing occupations.

In 1984, the Unfinished Agenda (National Commission, 1984) noted that previous federal mandates related to equity had limited success. In an effort to overcome the inequities of the vocational education system, the Carl D. Perkins Act of 1984 emphasized equity in vocational education **by** providing relevant training for the disadvantaged, reducing sex **stereotypes** by enrolling students in nontraditional programs and serving special populations more effectively. The Act contained the largest set-aside in the history of federal dollars for the vocational training of women and girls (Working Toward Equity, 1988) .

Changes in the health care industry, recent demographic studies and legislation have affected health occupations education. Thus, it was the opinion of the author that it would be helpful to develop a profile of 'secondary health occupations education students in

Purpose of Study

The purpose of this study was to develop a profile of secondary health occupations education students by analyzing data collected during previous years by the Pennsylvania Department of Education. With examination of the data, emerging issues and trends would become more apparent and would provide a framework for future program directions. The purpose was formulated into the following research questions:

1. What was the total vocational education secondary program enrollment by program area from 1984-85 through 1988-89?
2. What are the race and enrollment by gender and year of health occupations students?
3. How many health occupations programs are available and in what types of institutions?
4. What percentage of secondary enrollments in health occupations programs is handicapped or disadvantaged?
5. What are the health occupations secondary program enrollments and number of completers by grade and year?
6. How many student completers from secondary programs areas are gainfully placed during the years included in this **study**?
7. What percentage of gainfully employed completers is placed in various categories of health occupations?
8. What is the average hourly salary of completers of approved vocational education secondary programs?

9. Richards: Education Profile: The Heartbeat of Pennsylvania

What are the average salary ranks and percentages of teachers with no degree, undergraduate degree, and graduate degrees?

Methodology

Population

The population for the study included all students enrolled in approved secondary vocational education programs in Pennsylvania and their respective teachers. Data were collected annually over a five-year period from 1984-85 to 1988-89.

Instrumentation

The Division of Data Services uses a specific form called the Vocational Secondary Students Aggregate Enrollment Report, Form 4051. Forms are preprinted with the name and code of each program approved for each school. The form requests only aggregate data, however, a roster of students must be maintained at the local level. The roster (Form 4504) must correspond to the number of students reported on this Form (4051) and the child accounting Form (4014) for vocational reimbursement. Form 4504 is the required audit trail for child accounting.

Form 4051, the aggregate enrollment report, asks for the following information: type of **school**, program area, new programs, deleted programs, enrollment **by** grade, enrollment by special populations, racial/ethnic category, gender, completers, average hourly salaries of completers. In addition, the following information is requested from teachers: salary and educational level.

Data Collection

The Pennsylvania Department of Education, Bureau of Vocational and Adult Education, Division of Data Services is, responsible for

collecting annual data on enrollments of students participating in vocational education programs approved by the Pennsylvania Department of Education (PDE).

Vocational Secondary Students Aggregate Enrollment Report **Forms** are sent to every school with approved programs- Approved programs are required to complete data on every individual student enrolled in their respective programs. Data used in this study were collected annually over a five-year period from 1984-85 to 1988-89.

Data Analysis

Descriptive statistics were used to analyze the data. Frequency statistics produced counts and percentages for the values of individual variables. Frequency distributions allow the investigator to report (a) the most frequently occurring scores, and (b) patterns in the distribution of scores. All data were collected and analyzed by the Division of Data Services, at the Pennsylvania Department of Education.

Results and Discussion

Data obtained are reported by program enrollment and health occupations education teachers. These data are included in the following sections: (a) total enrollments by secondary program area, and (b) health occupations education teachers.

Total Enrollments by Secondary Programs

Table 1 depicts the total vocational education secondary program enrollment by program area from 1984-85 through 1988-89 in Pennsylvania. Total enrollments show a consistent decrease of students from 1984-85 through 1988-89 of 73,651 (38%). The largest decrease in numbers of students was between the 1987-88 and 1988-89 school year (26,762). Between these same years, the largest percentage of decrease

Table 1 Richards: Education Profile: The Heartbeat of Pennsylvania

Number of Vocational Education Secondary Enrollments by Program Area.

Program Area	1984-85	1985-86	1986-87	1987-88.	1988-89
Agriculture	11,122	10,267	9,443	8,445	6,829
Business	50,322	45,108	39,966	35,640	25,587
Health Occupations	5,081	4,557	4,210	3,593	3,233
Marketing & Distributive	7,071	6,263	5,809	5,202	4,274
Occupational Home Economics	9,002	8,419	7,502	6,613	5,505
Technical	7,766	7,477	--	--	--
Trade and Industrial	51,803	47,371	50,822	48,330	43,482
Not Elsewhere Classified	10,983	5,686	5,476	5,245	2,579
Consumer and Homemaking	44,846	46,338	45,307	37,439	32,316
Industrial Arts ¹	--	--	--	600	540
TOTALS	197,996	181,486	168,535	151,107	124,345

- NOTE: 1. As of 1986-87, the technical education program field is included in the trade and industrial education program field.
2. In 1987-88, the Pennsylvania Department of Education began approving programs in industrial arts education.
- Source: Pennsylvania Department of Education, 1988-89.

was in the Not Elsewhere Classified Group (51%) while the smallest percentage of decrease is in the Health Occupations (10%), Trade and Industrial (10%), and Industrial Arts (10%) fields. The Not Elsewhere Classified Group is defined as a single skill or special vocational education program that cannot be classified under any of the other eight program fields. In Health Occupations, the largest difference occurred between the 1986-1987 and 1987-1988 years (617, 15%) while the smallest difference occurred between the 1985-1986 and 1986-1987 years (347, 8%).

Enrollments in health occupations by race. Table 2 shows the health occupations education secondary program enrollments by race.

Table 2 Journal of Health Occupations Education, Vol. 5 [1990], No. 1, Art. 7
Number of Health Occupations Education Students by Race.

Race	1988-89	1987-88	1986-87	1985-86	1984-85
American Indian/ Alaskan Native	6	6	2	4	8
Asian/Pacific Islander	17	17	25	26	20
Black	566	609	813	853	1003
Hispanic	71	83	105	137	143
White	2573	2878	3265	3537	3907
TOTALS	3233	3593	4210	4557	5081

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

The table reveals that the majority of students participating in health occupations education are White followed by Black and Hispanic. For the five-year period, Whites ranged from 77 to 80%, Blacks ranged from 17 to 20%, and Hispanics ranged from 2 to 3% of the total population enrolled in health occupations education. These percentages are not consistent with Pennsylvania's population. In Pennsylvania, the population consists of 10,654,325 (89%) White, followed by 1,047,609 (9%) Black and 153,579 (1%) Hispanic, 64,381 (.5%) Asian/Pacific Islander, 9,459 American Indian, Eskimo, and Aleut and 90,954 designated as Other (Office of Economic Policy, Planning and Research, 1987) .

Richards: Education Profile: The Heartbeat of Pennsylvania
Enrollments in health occupations by year and gender. Table 3

portrays the frequency and percentage distributions of health occupations education secondary program enrollments by year and gender. The data reveal that the majority of students participating in health occupations education are female. The literature reveals that the national level of male participation is approximately 15%. Participation of males in health occupations education is markedly different ranging from approximately 5 to 7% over the last five years in Pennsylvania.

Table 3 "

Frequency and Percentage of Health Occupations Students by Year and Gender.

Gender		1988-89	1987-88	1986-87	1985-86	1984-85
Male	#	162	169	239	209	370
	%	5.01	4.70	5.68	4.59	7.28
Female	#	3071	3424	3971	4348	4711
	%	94.99	95.30	94.32	95.41	92.72
TOTALS		3233	3593	4210	4557	5081

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

Health occupations programs and type of institution. In Pennsylvania, most vocational education programs are found in area vocational technical schools (AVTS). These schools are high schools primarily used for vocational education. Table 4 shows a comparison of health occupations education programs and enrollments by type of institution (high school and area vocational technical school) for the

Table 4 Journal of Health Occupations Education, Vol. 5 [1990], No. 1, Art. 7
Number of Health Occupations Education Programs and Enrollments by Type
of Institution.

Year	Total		High School		AVTS	
	Programs	Enrollment	Programs	Enrollment	Programs	Enrollment
1988-98	112	3233	16	291	96	2942
1987-88	120	3593	20	411	100	3182
1986-87	123	4210	24	736	99	3474
1985-86	126	4557	24	800	102	3757
1984-85	130	5081	26	973	104	4108

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

past five years with most health occupations education programs being housed in area vocational technical schools.

Handicapped and disadvantaged students in health occupations. The Pennsylvania Department of Education (1988-89) defined handicapped as: a student evaluated as being brain damaged, deaf, hearing impaired, learning disabled, mentally retarded educable, mentally retarded trainable, mentally retarded severely/profoundly, physically handicapped, socially and emotionally disturbed, speech and language impaired, or visually impaired, who because of those impairments requires special education and related services.

(p. 33)

In the same publication, disadvantaged is defined as a student who is either academically or economically disadvantaged for reason other than handicapped and includes those who are of limited English proficiency (The Pennsylvania Department of Education, 1988-89, p. 33).

With its enactment in 1975, the Education for All Handicapped Children Act (EAHCA) requires that handicapped and disadvantaged students must be placed in the least restrictive environment or mainstreamed into the regular classroom. This has resulted in increased enrollment of these students in regular classrooms.

Table 5 lists the secondary enrollments of handicapped and disadvantaged students in Pennsylvania's health occupations education for the past five years. Total disadvantaged enrollments have remained at approximately one-third of the total enrollments over the five year period while handicapped enrollments have increased from 1985-86 to 1988-89 by 5%. These percentages are not representative of disadvantaged and handicapped enrollments in vocational education across Pennsylvania. Marjorie Millard, Supervisor of Special Vocational Programs and Services in Pennsylvania reports that the number of disadvantaged students decreased by 13% and number of handicapped students decreased by 11% in the last five years (Center for Vocational Personnel Preparation, January 1990, p. 2).

Enrollments and completers by grade and year in health occupations. Table 6 portrays the secondary program enrollments and completers by grade and year. Ungraded and adult are combined and include ungraded students in the same age groups as those students in grades 9 through 12 and adults who are high school graduates or who have left high school prior to graduation. Because of decreased enrollments in vocational education, many secondary programs have opened their doors to adults who wish to complete specific programs. Adult students have increased in numbers over the five-year period. Graduation rates (completers divided by grade 12) are consistently high (93-97%) except for the 1985-86 school year (83%).

Table 5

Journal of Health Occupations Education, Vol. 5 [1990], No. 1, Art. 7
Percentages of Secondary Enrollments of Handicapped and Disadvantaged

Students in Health Occupations Education Categories. (H = handicapped;

D = disadvantaged)

Category	1988-89		1987-88		1986-87		1985-86		1984-85	
	H	D	H	D	H	D	H	D	H	D
Clinical Lab Asst	0	26	4	43	4	34	3	29	2	19
Dental Assisting	6	28	5	30	3	30	5	25	8	16
Dental Lab Tech	0	54	10	26	11	25	4	4	12	41
Health Assisting	13	35	12	33	9	33	7	32	7	30
Health Related Tech	0	27	1	74	1	71	0	74	1	55
Home Health Aide	14	43	19	39	28	25	19	12	26	25
Medical Assisting	15	16	11	30	8	25	7	18	2	13
Microbiology Tech	9	30	6	33	8	28	15	17	11	13
Nursing Assisting	15	18	25	52	20	52	18	53	15	68
Total % of all HOE enrollments	12	38	12	38	10	37	7	35	8	36

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

Table 6

Number of Health Occupations Education Secondary Program Enrollments

and Completers by Grade and Year.

Year	Grade 9	Grade 10	Grade 11	Grade 12	Ungraded & Adult	Total	Completers
1988-89	19	733	1165	1155	161	3233	1092
1987-88	14	780	1200	1464	135	3593	1355
1986-87	4	802	1643	1613	148	4210	1564
1985-86	24	961	1709	1745	118	4557	1444
1984-85	18	1018	2048	1886	111	5081	1753

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

Richards Education Profile: The Heartbeat of Pennsylvania
Gainfully placed completers in all vocational secondary programs.

Table 7 shows the follow-up of gainfully placed completers in all secondary program areas and Not Elsewhere Classified. Gainfully placed completers are defined as graduates who are (a) employed related to training, (b) employed not related to training, (c) in military service, or (d) pursuing additional education. Not Elsewhere Classified included Diversified Occupations and Vocational Education, Other. Statistics were not available for the 1988-1989 follow-up of gainfully placed completers.

Table 7

Follow-up of Gainfully Placed Completers by Percent of Respondents in Vocational Program Areas.

Program Area	1984-85	1985-86	1986-87	1987-88
Agriculture	85.8	90.5	91.8	91.1
Business	88.1	89.8	90.8	90.2
Health Occupations	84.6	87.0	85.8	88.4
Marketing & Distributive	83.2	84.7	86.7	86.6
Occupational Home Economics	76.5	78.9	81.2	78.8
Technical	92.0	93.6	--	--
Trade and Industrial	88.1	89.7	91.5	91.1
Not Elsewhere Classified	90.9	91.0	92.4	91.3
TOTALS	87.4	91.0	90.4	89.9

NOTE: 1. As of 1986-87, the technical education program is included in the trade and industrial education program field.

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88.

Gainfully employed completers in health occupations. Table 8 provides information on the follow-up of gainfully employed completers

Follow-up of Gainfully Employed Completers by Percent of Respondents in Health Occupations Categories.

Category	1987-88	1986-87	1985-86	1984-85
Clinical Lab Asst	87.5	86.7	90.3	82.6
Dental Assisting	89.0	83.6	86.5	90.7
Dental Lab Tech	66.7	83.3	87.5	80.0
Health Assisting	89.5	86.5	88.4	87.7
Health Related Tech	91.9	92.9	93.2	93.9
Home Health Aide	55.0	63.2	63.2	53.6
Medical Assisting	88.3	96.2	87.3	82.5
Microbiology Tech	100.0	100.0	85.7	100.0
Nursing Assisting	87.0	78.1	79.7	68.6
TOTALS	88.4	85.8	87.0	84.6

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88.

in a breakdown of health occupations education by category.

Information was not available for the 1988-1989 school year.

Average salary of completers of all program areas. Table 9 shows the average salary of completers of approved vocational education secondary programs. Data were not available for the 1988-1989 school year.

Health Occupations Education Teachers

Table 10 lists the average salary rank (1st = highest) and percentage of teachers within three educational levels. Nondegree (ND) includes high school and one to four years of college. Undergraduate degree (UGD) denotes a bachelor's degree and graduate degree (GD) includes both master's and doctorate degree. The high percentage of

Table 9 Richards: Education Profile: The Heartbeat of Pennsylvania

Average Hourly Salary of Completers of Approved Vocational Education

Secondary Programs.

Program	1985-86	1986-87	1987-88
	<u>Hourly Salary</u>		
Agriculture	4.90	5.16	5.57
Business	5.15	5.48	5.78
Health Occupations	4.78	4.97	5.34
Marketing & Distributive	4.54	4.93	5.20
Occupational Home Economics	4.39	4.68	4.82
Trade and Industrial	5.72	6.21	6.53
Not Elsewhere Classified	5.32	5.93	6.01
AVERAGE TOTALS	5.29	5.75	6.05

Sources: Pennsylvania Department of Education, Vocational education secondary program statistics, 1985-86, 1986-87, 1987-88.

nondegree teachers in trade and industrial, occupational home economics, and health occupations education programs evolves from the two routes of certification available in these fields for teachers in Pennsylvania. The **nondegree** route requires 60 semester credit hours with approximately equal numbers of general education and vocational education credits for teacher certification.

Although Trade and Industrial had **the** highest average salary of all vocational program areas, instructor salaries were ranked fifth primarily. On the **other** hand, Marketing and Distributive salaries were consistently ranked first or second while the average salary of secondary completers was ranked sixth in this program area. The higher salaries appear to be attributed to the high percentage of (Table 10) faculty with graduate degrees (61 to 65%). Marketing and Distributive, Business, and Not Elsewhere Classified were the only three program

Average Salary Rank and Percent of Teacher's Educational Levels by Vocational Program Area.

Program Salary and Educational Level	1984-85	1985-86	1986-87	1987-88	1988-89
Agriculture					
Salary Rank	7th	7th	6th	7th	8th
ND	*1.7	*2.0	*2.0	*2.4	*2.6
UGD	57.1	55.5	55.6	56.4	55.1
GD	41.2	42.5	42.4	41.2	42.3
Business					
Salary Rank	3rd	3rd	2nd	4th	4th
ND	*0.1	●0.1	*0.1	0.0	0.0
UGD	47.7	48.3	48.1	47.9	47.6
GD	52.2	51.6	51.8	52.1	52.4
Health Occupations					
Salary Rank	6th	6th	7th	8th	7th
ND	*24.5	*25.5	28.6	*29.6	*29.2
UGD	30.7	30.7	30.7	31.0	33.1
GD	44.8	43.8	40.7	39.4	37.7
Marketing & Distributive					
Salary Rank	1st	1st	1st	2nd	2nd
ND	*4.9	*3.9	*4.5	*4.5	*4.3
UGD	30.7	30.9	33.3	33.8	34.8
GD	64.4	65.2	62.2	61.7	60.9
Occupational Home Economics					
Salary Rank	3rd	5th	3rd	6th	6th
ND	30.0	28.3	30.6	32.2	30.8
UGD	31.5	31.7	32.0	33.6	34.1
GD	38.5	40.0	37.4	34.1	35.1
Trade and Industrial					
Salary Rank	5th	4th	5th	5th	5th
ND	56.3	56.6	54.8	56.9	55.8
UGD	13.6	14.1	14.2	13.1	14.7
GD	30.1	29.3	31.0	30.0	30.5
Not Elsewhere Classified					
Salary Rank	4th	2nd	4th	3rd	3rd
No	*15.2	14.2	18.4	*7.4	*7.3
UGD	32.4	30.9	28.7	36.1	34.8
GD	52.4	54.9	52.9	56.5	57.9

(Table 10 - continued)

Program Salary and Educational Level	1984-85	1985-86	1986-87	1987-88	1988-89
Consumer and Homemaking					
Salary Rank	8th	8th	8th	9th	9th
ND	0.0	0.3	0.1	0.1	0.0
UGD	68.4	67.8	70.0	67.0	65.1
GD	31.6	31.9	29.9	32.9	34.9
Industrial Arts					
Salary Rank	NA	NA	NA	1st	1st
ND	NA	NA	NA	0.0	0.0
UGD	NA	NA	NA	26.3	15.8
GD	NA	NA	NA	73.7	84.2

ND* - includes 1 to 4 years of college only. NA - not applicable;
 UGD - undergraduate degree; and GD - graduate degree.

Sources Pennsylvania Department of Education, Vocational education secondary program statistics, 1984-85, 1985-86, 1986-87, 1987-88, 1988-89.

areas with over 50% of their respective faculty holding graduate degrees.

Conclusions, Implications, and Recommendations

Conclusions

Health occupations education programs in Pennsylvania are primarily housed in area vocational technical schools. Disadvantaged enrollments have remained fairly consistent and represent approximately one-third of the total enrollment in health occupations while handicapped enrollments have increased slightly (5%). These enrollments are not consistent with all the other vocational program areas which have seen a total decrease in disadvantaged (13%) and handicapped (11%) participants. Most students are white with

of the population. The students are primarily female (95%) which is markedly different from male participation at the national level. Students enrolled in health occupations have a fairly high rate of program completion. The follow-up of gainfully placed health occupations education completers falls below the average for all other vocational program areas. In the breakdown by category, home health aide was least successful in obtaining gainful employment, ranging from 53.6 to 63.2% over the four year period reported. Average salary of health occupations education student completers was below the average of all other vocational program area student completers and ranked fifth of seven program areas for the three reported years. Teacher salary ranks in health occupations were consistently lower across the five reported years ranging from sixth of eight program areas in 1984-85 and 1985-86, seventh of nine in 1986-87 and 1988-89, and eighth of nine in 1987-88.

Implications

The findings of this study suggest several implications for school administrators, counselors, and health occupations education teachers. Education is a continuing partner **in** the economic development of the Commonwealth. With the current shortage of health care workers building to crisis proportions, the focus must be on recruiting and educating capable students for the second largest industry of Pennsylvania.

With the decreased school age population, recruitment efforts for health occupations education should begin in the middle schools which would involve adolescents, males and females of all races, in health

services and encourage careers in the health care industry. Secondary programs **should** continue to encourage the enrollment of adults who wish to complete specific programs.

The findings suggest that health occupations education teachers need to work closely with guidance counselors. Selection of students for health occupations education should be based on interest and academic ability, not on interest alone. The enrollment of trainable mentally retarded and seriously emotionally disabled students in health occupations education is inappropriate.

With the finding that most health occupations education programs are located in area vocational technical schools rather than comprehensive high schools, academic science and mathematics courses need to be offered for those students interested in postsecondary education. Articulation agreements between secondary and **postsecondary** schools offering health occupations education would serve as an advantage in recruitment of students.

Although the findings revealed a fairly high completion rate, the recruitment of academically capable students into health occupations education would serve to improve the completion rate. With the current need for health care workers, demand should drive salaries upward.

Recommendations

From the reported data, health occupations educators should reexamine the category of home health aide with its low placement. With higher numbers of disadvantaged and handicapped students, limited resources may need to be reallocated to provide assistance (such as teacher aides) to faculty working with these populations. Recruitment efforts should focus on bringing more males into health occupations to

counteract the gender typing that has produced a high enrollment of females in training for the lower-paying occupations and a low enrollment of males in the caring and nurturing occupations (Farmer, et al., 1985) .

The health care industry is in a state of change. To meet the needs of employers in this industry, vocational education should consider restructuring its system of preparing and certifying health care workers **by** recruiting more minorities into the health care professions, facilitating the reentry of adult students, encouraging nontraditional opportunities for males, offering **prerequisites** (sciences and mathematics) needed for further education in the health care field, and by providing articulation models which maximize prior learning and financial investment. With the current shortage of health care workers building to crisis proportions, supply and **demand** factors will increase salaries in the health care field. The ability of health care facilities to provide critical services to citizens is threatened and this issue will continue to receive national attention. Thus, the health occupations profile, which is the heartbeat of not only Pennsylvania but every other state in the nation, should be continuously studied and evaluated.

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