A Field Experience in Public Health Nutrition with the Nutrition Section of the Delaware Division of Public Health

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To the Graduate Council:

I am submitting herewith a thesis written by Teresa Ann Thompson entitled "A Field Experience in Public Health Nutrition with the Nutrition Section of the Delaware Division of Public Health." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Daniel Hubbard, Major Professor

We have read this thesis and recommend its acceptance:

Roy E. Beauchene, Irshad Ahmad

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)
To the Graduate Council:

I am submitting herewith a thesis written by Teresa Ann Thompson entitled "A Field Experience in Public Health Nutrition with the Nutrition Section of the Delaware Division of Public Health." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Accepted for the Council:

[Signature]
Major Professor

We have read this thesis and recommend its acceptance:

[Signature]
Vice Chancellor for Graduate Studies and Research
A FIELD EXPERIENCE IN PUBLIC HEALTH NUTRITION
WITH THE NUTRITION SECTION OF THE DELAWARE
DIVISION OF PUBLIC HEALTH

A Thesis
Presented to
the Graduate Council of
The University of Tennessee

In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Teresa Ann Thompson
August 1974
ACKNOWLEDGMENTS

The student wishes to express sincere appreciation to Miss Mayton Zickefoose, Nutritionist III, and Mrs. Janet Postles, Nutritionist I, of the Office of Nutrition, Delaware Division of Public Health, for planning and providing a variety of meaningful experiences. Appreciation is also extended to the many other health professionals in the Delaware Division of Health and Social Service for providing a variety of opportunities for observation and participation in activities within the field of public health.

For his patient help and guidance in the preparation and writing of this thesis, the student wishes to thank Dr. Daniel Hubbard, Department of Nutrition, University of Tennessee. Appreciation for their cooperation and assistance is also extended to Dr. Roy E. Beauchene, Department of Nutrition, and Dr. Irshad Ahmad, Department of Health and Safety.

A sincere appreciation for financial assistance is extended to the Maternal and Child Health Service, Department of Health, Education and Welfare, Washington, D. C., which made this graduate work possible. The student wishes to express a very deep appreciation to Miss Melba Mensch, a Tennessee State Nutritionist of the Division of Public Health and Mrs. Rena Mills, Nurse Supervisor of five East Tennessee counties, for the professional inspiration which they instilled within this student during her summer of 1973 experience in public health at the county level. The student will be eternally grateful to her mother, Mrs. Elizabeth Thompson, and her brothers and sisters for their continuous encouragement and support throughout her entire academic endeavors.
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CHAPTER I

INTRODUCTION

The seven week field experience described in this thesis was provided as a supplement to and an opportunity for the blending of previous academic work with practical application in real situations.

Delaware was chosen to serve as the field training site for a variety of reasons. It provided both rural and urban settings, competent nutrition programs, and staff with the ability to guide and supervise a student in professional health activities. Delaware also provided an excellent contrast and addition to the student's previous summer experience of public health nutrition at the county level in East Tennessee.

The specific objectives for the field experience were as follows:

1. To obtain increased understanding of the total organization and current programs of the health department.

2. To comprehend the role of nutrition services within the total program of the health department.

3. To develop an appreciation for and to increase the student's abilities to function as a nutritionist through the observation and participation of nutrition services.

To accomplish these objectives, a comprehensive program of varied experiences was planned by the Director of Nutrition. This program consisted of observing the functions of public health professionals, performing functions of a public health nutritionist, and attending professional meetings.
The following chapters summarize the history, geography, economy, education, and demography of the State of Delaware. The organization and functions of the Delaware Department of Health and Social Services and the Office of Nutrition are also described. Finally, the student's field observations and special activity are analyzed as well as an evaluation of her professional growth and development provided by the field experience.
A study of Delaware's history, geography, economy, and demography was necessary in order to understand the current health problems of the people. Assessment of the current health problems of an area provides the basis for the health needs determination which in turn provides the basis for the development of health programs. The area background information therefore provides an indication of both the scope and direction of health programs as well as the present health needs of the population based on their origins and current health status.

History

The earliest European explorations of Delaware's coast line were made by the Spanish and Portuguese in the sixteenth century. In 1610, a captain, taking refuge in the Delaware Bay from a storm, named the cape for the Lord de la Warre. The name Delaware was later accepted as the state name. Colonization did not occur until 1631, when the Dutch made their first attempt to establish a settlement. The first permanent settlement was established in 1638 by Swedish colonists. During the following years the Dutch regained and held possession of the colony until the British gained control in 1664. Finally in June of 1776, Delaware became a separate state (1).

The majority of influences in population came from the British immigration. However, there were also a variety of European influences from the long established Scandinavian, Dutch, African, and French peoples as well as more recent generations of German, Italian, Slavic,
Jewish, Welsh, and Puerto Rican descent. The heritage and area culture are also enriched by an active Amish community (2,3).

Geography

Delaware, our second smallest state, contains 2,057 square miles, of which 79 square miles are inland water. It is situated on the upper portion of the Del-Mar-Va Peninsula. Delaware is on the mid-Atlantic coast, bordered on the north by Pennsylvania, on the east by the Delaware River and Bay and the Atlantic ocean, and on the south and west by Maryland.

Delaware is mainly situated in the level coastal areas of the Atlantic Coastal Plain. The Piedmont Plateau in the northern portion of the state provides Delaware with its rolling hills and lovely green valleys. The level coastal areas seldom rise 60 feet above sea level whereas a portion of the Piedmont Plateau reaches the elevation of 438 feet above sea level (4).

Delaware boasts of possessing relatively level, fertile soil and abundant water supplies. The climate is mild, averaging 36.0 degrees in the winter and 74.3 degrees in the summer. The average rain fall is approximately 45 inches. The average yearly snowfall is approximately 16 inches (5).

Economy

By possessing both an abundance of water power and transportation systems and an easy access to versatile markets, Delaware boasts of productive agriculture and industry. Also the mild climate and good soil of Kent and Sussex counties make them particularly well
adapted to farming. The major products produced are poultry, field crops, vegetables and melons, dairy products and greenhouse and nursery items (5).

The availability of resources, favorable tax structures, easy market access as well as abundant power has promoted the development of industries in the New Castle County area. The two largest industries are the chemical manufacturing center and the textile mills located near Wilmington. A variety of other industries producing such diversity of products as latex products, automobiles, rubber hose, luggage, dental supplies, oil and gasoline products, and many others are scattered across the state. The industrial growth in particular has influenced Delaware's economy and resulted in an unusually high per capital income (6).

Education

The educational systems of Delaware offer a variety of training to its inhabitants. They are public, private, and parochial schools. For the preschool children there are both headstart and daycare programs available.

Free public education is offered to children from six to twenty-one years of age. Mandatory school attendance is required for children between seven and sixteen years of age. The seven schools of higher learning include three four-year institutions, three junior colleges, and a community technical college.

Of 136,621 males twenty-five years old and over, 1970-1971 figures indicate 25% had only completed from 0 to 8 school years and
75% had completed more than 9 school years. Of 150,774 females twenty-five years of age and over, 22% had only completed from 0 to 8 school years and 88% had completed more than 9 school years. The median number of school years completed for both males and females were 12.1 school years. The number of school years completed by persons twenty-five years and over for 1970-1971 indicate the Black male had completed 9.6 median school years, the Spanish male and the White male 12.3 median school years. The Black female had completed 10.2 median school years, the Spanish female 12.1 median school years, and the White female 12.2 median school years (5).

Demography

The 1970 census figures indicate that of the state's total population, 71.2% live in New Castle County and the remaining 28.8% is almost equally divided between Kent and Sussex counties. The population density varies across the state with the city of Wilmington and New Castle County having the greatest population density (71.2% of the total state population on approximately 23% of the total state area) and Sussex County having the lowest population density (14.4% of the total state population on approximately 48% of the total state area). The 1970 census also indicated a population trend of people at higher socioeconomic levels having migrated from the city into the suburbs and surrounding areas. This has created a situation in which the poorly trained and semi-skilled, and/or medically indigent people have been left in the city. The majority of the population in Kent and Sussex counties live in rural to small town areas (5).
The 1970 income figures on income of the Delaware population show the median yearly income for a White male fourteen years old or older is $7,565; for a non-White male $4,294; for a White female $2,494; and for a non-White female $2,115. Of the total Delaware population in 1970, 10.9% were living below the poverty level. Of all persons below age 65, only 9.8% were living below the poverty level; whereas, of all persons age 65 and over, 24.1% were living below the poverty level. Approximately 25.4% of all the Black families had 1970 incomes below the poverty level in comparison with only 5.9% of all the White families who had 1970 incomes below the poverty level (5).

The majority of the low income families lived in Sussex and Kent counties. This may be due to the age ranges and work available in each of the lower counties. Sussex County has an older White population (median age for males is 30.4 years, for females 34.0 years). Approximately 46% of its Black population is under 18 years of age, and over 85% of its total population is rural. Kent County's White population is slightly younger (median age for males is 24.1 years and for females 26.0 years). Approximately 43% of its Black population is under 18 years of age and 61% of its total population is rural (5).

Birth rates have declined in Delaware since 1960; however, Delaware's birth rates tend to be above the national average. In 1971, the nation's birth rate was 17.3 per 1,000 persons; Delaware's was 17.8 per 1,000 persons. The birth rate for White females was 16.6 and for non-White females 25.5. The premature birth rate (the number of births gestational age 35 weeks or less per 1,000 live births) for White females was 25.8 and for non-White females 75.1. The high birth rate for
Delaware is understandable because approximately \( \frac{44}{100} \) of the population is between 14 and 44 years of age (5).

The 1972 figures indicate a higher rate of infant mortality for Delaware than for the United States. The rate of infant mortality of White state residents was 12.94 deaths per 1,000 live births which was lower than the nation's rate of 16.3 deaths per 1,000 live births. The non-White state resident infant mortality rate was 38.01 deaths per 1,000 live births which is higher than the nation's rate of 29.0 deaths per 1,000 live births. These statistics do not indicate the rate of infant mortality for the migrant farm workers who may spend as much as one-fifth of the year in Delaware (5).

The 1970 census indicated 43,833 people age 65 and over lived in Delaware and projected that this population would grow to 57,151 persons by 1980. This would represent an increase in the elderly population of 30% compared to a 19% increase for the general population in Delaware. Of the 11,689 elderly households, nearly one-half had incomes of $5,000 or less (7).

The death rate for the state of Delaware (9.1 per 1,000 live population) was slightly lower than the national average (9.3) in 1971. The death rate per county was 7.6 for Kent County, 7.9 for New Castle County, and 9.9 for Sussex County (this figure for Sussex County may reflect the county's larger number of older persons). The leading causes of mortality are listed in Table I (5).

From this health assessment of the general population, it indicated that nutrition programs should be aimed at the low income populations especially the young, the pregnant non-White population and the
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65 years and older population. Information, encouragement and guidance is needed to put nutrition into practice by means of low cost nourishing meals made with regular market foods. Programs should also be aimed at disseminating information to the general public concerning prevention of heart disease and diabetes. The preponderance of youth in the population suggests the need for nutrition programs at all school levels in order that they might have and use better knowledge and understanding of foods and nutrition. Young consumers might thus be able to influence their parents' knowledge and practices of food purchases, food preparations, and nutrition.

The health needs of the Delaware population also vary with the type of employment, industry vs. agriculture. The age distribution, education level and area of residency are also factors which influence the types of problems to be developed and the types of services to be offered. In the application of the programs, the cultural histories of the people must be considered and planned for in order to present the programs which will be both culturally sanctioned and socially acceptable to the target populations.
CHAPTER III

PROGRAMS AND SERVICES TO MEET THE NEEDS OF DELAWARE'S POPULATION

The state government of Delaware was reorganized in March of 1969, to a cabinet-form of government. The Department of Health and Social Services was the first umbrella agency established under this cabinet. The agency consolidated the programs and activities of over 120 separate health, welfare, and correctional agencies into an organization that could provide comprehensive services in the best possible manner at the lowest cost to Delaware's citizens. The Department of Health and Social Services is composed of eleven major divisions and offices. A description of each division and office follows.

Division of Mental Health

The Division of Mental Health provides mental health facilities and program planning for those afflicted with mental illness. Mental health facilities which operate and coordinate mental health programs consist of a statewide network of Mental Hygiene Clinics, the Governor Bacon Health Center for behaviorally disordered individuals of all ages, the Delaware State Hospital for the Mentally Disturbed, and the Charles L. Terry, Jr. Children's Psychiatric Center. The Division also cooperates with Detoxification and Treatment centers at Area Neighborhood Centers across the state to combat the problems of alcoholism.

Division of Mental Retardation

The Division of Mental Retardation is responsible for the care
and treatment of mentally retarded persons of all ages. The Community Mental Retardation Program operates Daytime Care Centers for those with severe mental retardation and the All Star House for employable mentally retarded men. Stockely State Hospital for the Mentally Retarded in Georgetown provides in-patient care for the mentally retarded of all ages.

Office of the Medical Examiner

The Office of the Medical Examiner investigates all violent, unnatural, sudden and unexplained deaths to determine the cause and manner of death. The results of these investigations are used in public health, public safety, public health education programs, administration of justice, criminal proceedings, and civil litigations. In addition, the laboratories of this office conduct analyses on narcotics, dangerous drugs, and lead poisonings.

Division of Adult Corrections

The Division of Adult Corrections is responsible for the rehabilitation of offenders and their restoration as useful, law abiding citizens within the communities. To achieve this, the Division is responsible for the operation of adult detention and correctional facilities for the state, as well as probation and parole services. The Division also assists prisoners in adjusting to community life. This student was greatly impressed by the modern facilities, efficient security system, the educational programs, and the other rehabilitation opportunities available for inmates of the all male Adult Correctional Institute at Smyrna.
Division of Juvenile Corrections

The Division of Juvenile Corrections is involved in the detention, redirection, and aftercare of youthful offenders. The Division operates two detention homes and two correctional schools as well as supervising and coordinating the services and activities available to the discharged juveniles through Group Homes which are located throughout the state.

Drug Abuse Program

The Drug Abuse Program, based at the Emily P. Bissel Hospital, was established to meet the growing need to combat drug abuse, particularly among young people, by unifying efforts across the state. The major purpose of this program is to provide drug abuse counseling and education to all persons in the state.

Division of Youth Affairs

The Division of Youth Affairs, established in fall of 1970, encourages the involvement and active participation of Delaware Youth in all phases of community life. This Division cooperates with other government and private agencies of the state by providing research, planning, consultation, and training services.

Division of Social Services

The Division of Social Services is responsible for the administration and disbursement of welfare monies and food stamps to Delawareans who qualify for such programs. The Division is actively involved in work incentive programs and in research for the improvement
of the state social service programs. Services for the Visually Impaired, the Aged, and to Families and Children are also included in the Division as well as Child Development Programs.

Office of Administrative Services

The Office of Administrative Services coordinates the fiscal and personnel services for the Department of Health and Social Services. The Office is directly involved in budgeting, purchasing, federal grants, personnel and industry relations, facility construction, statistics, and payroll processing.

Office of Planning, Research, and Evaluation

The Office of Planning, Research and Evaluation is concerned with the overall planning and evaluation of social and health service programs both within the department and within the state.

Division of Public Health

The Division of Public Health sets standards for and provides for health care and services throughout the State of Delaware. The Administrator of this Division also serves as the Administrator of the Delaware Home and Hospital for the Chronically Ill at Smyrna and the Emily P. Bissell Hospital for Chest Diseases in Wilmington.

The responsibilities of the Division of Public Health are divided among five Bureaus. A brief discussion of each bureau follows.

Bureau of Specialized Health Services. The Bureau of Specialized Health Services is responsible for a variety of diverse services provided by the Office of Professional Licensing Boards, Office of Emergency
Health Service, Office of Health Facilities Licensing and Certification, Office of Health Education, Office of Dental Health, Office of Vital Records and Statistics, and Office of Narcotics and Dangerous Drugs. The nutritionists work with the dental health programs. In preparing reports and forecasting future needs, the nutritionists work with the Office of Vital Records and Statistics.

Bureau of Disease Control. The Bureau of Disease Control directs and coordinates the activities of the Office of Communicable Diseases, Office of Chronic Diseases, Office of Nutrition, and Office of Laboratories. The Bureau's main function is the prevention and detection of disease through screening, immunization, and education. The student was pleased to note the Director of the Bureau felt strongly that Nutrition services were vitally important in the prevention of preventable diseases and the maintenance of chronically-ill patients.

Bureau of Environmental Health. The Bureau of Environmental Health includes the office of Sanitary Engineering, Office of Food Control, Office of Radiation Safety, and Office of Institutional and General Sanitation. The primary purpose of this Bureau is the prevention of diseases or illnesses caused by environmental factors such as pollution of air or water, contamination of water or food sources by harmful agents, over-exposure to harmful radiation (which is expanding to include provisions concerning nuclear power plants), vector control and many others.
Bureau of Personal Health Services. The Bureau of Personal Health Services encompasses the Office of Crippled Children's Services, Speech and Hearing Services, Office of Maternal and Child Health, Psychological Services, Office of Physical and Occupational Therapy, and Office of Medical Social Services. This Bureau not only coordinates the activities of its offices but also works in close relationships with Nursing, Nutrition, and other Bureaus within the Divisions of the Department of Health and Social Services. Any person in Delaware who may possibly be handicapped, can attend clinics for diagnosis and therapy. Conditions treated range from genetic origin and birth defects to accident-caused defects. Under the Office of Maternal and Child Health, clinics across the state may provide prenatal, postnatal, and family planning services as well as well-baby conferences and immunization services.

Bureau of Nursing. The Bureau of Nursing is in charge of the Office of Nursing Education, Office of Community Nursing, Office of Maternal and Child Health, Crippled Children and Mental Retardation Nursing, Office of Psychiatry and Mental Health Nursing and Office of Rehabilitation Nursing. Public Health Nurses usually restrict home health care to the aged, the chronically ill and the handicapped. In the Maternal and Child Health program, the nurses provide clinic services to mothers and well babies which range from immunizations to nutrition counseling.

Local health units. The individual county health units carry out the programs which have been developed at the state level, by
providing direct services (such as maternal and child health, orthopedic services, venereal disease control and tuberculosis control) to their populations. The Nutritionists work closely with the Health Units to provide both direct counseling to individuals as well as providing consultation to the professional health staffs.
CHAPTER IV

OFFICE OF NUTRITION

The broad major objective of the Office of Nutrition is to establish, develop and promote an educational program which will contribute to the improvement of the nutritional status of the citizens of Delaware. There is emphasis on nutrition services for groups most susceptible to nutritional deficiencies, such as expectant and nursing mothers, infants and children, the aged, those with chronic illnesses, and those on limited food budgets.

The nutritionists integrate the nutrition programs into the total state health program by cooperating with the personnel of the federal, state and local health departments and other voluntary agencies; social and welfare agencies; public and private schools; Cooperative Extension Services; community groups; nursing and convalescent homes; head start and day care programs; medical clinics; public health nursing and the Visiting Nurse Association of Wilmington; family groups (particularly low income families); Senior Citizen Centers; grocery stores; and individuals referred for help on therapeutic diets. In this way both direct and indirect nutrition services are provided by the Office of Nutrition with their limited number of nutritionists. The Office of Nutrition is currently providing the Women, Infants, and Children (WIC) Supplemental Foods program to Delawareans who qualify for the supplemental foods.

The Office of Nutrition is staffed by:
Consultant and Manager of the Office of Nutrition Services,
Two full-time nutritionists,
One part-time nutritionist,
One full-time secretary,
One part-time administrative assistant with WIC,
One full-time medical clerk with WIC.

The Nutrition Consultant (Nutritionist III) is responsible for the planning and administration of the total nutrition program state-wide. She serves as consultant for both public and private referrals; and as nutritionist on various committees both official (federal, state or local) and voluntary. She is also the director of the other state employed nutritionists within the Office of Nutrition and the students which come for field experience in nutrition.

One full-time nutritionist works in the New Castle Health Unit. She is responsible for the nutritional components of licensing, inspection of, and consultation with large nursing homes (state-wide) which are receiving federal monies. She is also responsible for the nutritional counseling in other areas of the county.

The other full-time nutritionist works in the Nutrition Office in Dover. She is primarily responsible for the nutrition component of the licensing, inspection of, and consultation with small nursing homes in a family setting (four beds and under) and day care centers not accepting federal funds. She also works in other areas of the community where nutrition is involved.

The part-time nutritionist serves as nutrition consultant to the Kent and Sussex County Health Units, primarily in the Title XIX program with the medicaid children.
Although each of these nutritionists have their own primary responsibilities, they substitute for each other when the need arises. Thus, there is excellent understanding concerning the various on-going nutrition programs as well as excellent cooperation and consideration between the members of the staff. The nutritionists have excellent rapport with other health professionals in the other health fields because of the interagency communications and because of the interdisciplinary health survey teams which have been established.

The nutritionists are hired by the state and are under the merit system of the state. The job descriptions are included in Appendix Z.
CHAPTER V

STUDENT'S ANALYSIS OF OWN PERFORMANCE

Analysis of Nutrition Observations

The student frequently conferred with other health professionals in the health department to gain better understanding of their roles and of the services and activities their offices, bureaus, and division offers Delawareans. The student felt these meetings were an important and valuable influence in developing the student's understanding of Delaware's Division of Public Health and its nutrition services.

Consultation with Health Department staff. Consultation with other professional staff members occurred frequently and informally in the field agency. The majority of the state health professionals are housed in one entire building of four levels in a complex of state buildings. This makes possible the frequent and informal interdisciplinary communications at state and local levels. The student was introduced to this well-developed network of communication on her first day in the Office of Nutrition. The Dover Office of Nutrition is a large room in which Miss Zickefoose, Nutrition Consultant, Mrs. Postles, Nutritionist I, the secretary, the administrative assistant and the medical clerk with WIC have their desks. Due to the close quarters and informal atmosphere, communication flowed freely among staff and the student. Often other health professionals "dropped in" to discuss personal or professional problems and
frequently answered questions the nutritionists had concerning programs, policy or procedure methods.

The student enjoyed the informal method of consultation because it encouraged health department staff members to communicate freely among the different offices and bureaus and to take advantage of the special skills, knowledge, and interests of the many different specialists available. The informal consultation also prompted members of other disciplines to circulate nutrition articles from their journals to the Office of Nutrition, which in turn sent articles of interest to other offices and bureaus.

In-service education. The student participated in two in-service education programs. One was given at the Visiting Nurse Association Building in Wilmington for the Home-Health aides. The second was given at a University of Delaware night class for school nurses and two teachers. An outline of the lecture for the home-health aides program and for the night class are included in Appendices B and C.

The purpose of the program for the home-health aides was to furnish basic information on nutrition and how it relates to the care of patients on special diets. The student discussed the basic four groups and nutrients such as iron, calcium, vitamin A and vitamin C, which are frequently low in patients' diets. The student gave each aide a copy of *Family Fare a Guide to Good Nutrition* (8), explaining each section to the aides, and encouraging them to read through and use recipes to incorporate a variety of foods into the meal. Miss Zickefoose explained how knowledge of the basic nutrition information could help the
aides in their understanding of the modified diets some of their patients had been prescribed.

The student felt very frustrated after the program, because she could not get the home-health aides to respond to the questions and suggestions she directed to them, nor elicit many questions from them concerning problems or situations which they had already encountered. The student concluded that the home-health aides were not too interested in the program because they had very little to do with the actual meal preparation so that they did not personally see the need for the nutrition program. It was hoped that the aides would as a minimum apply the nutrition information to themselves and their own families.

The University of Delaware night class was more rewarding. The student presented information concerning the history and current operations of the school lunch programs in the State of Delaware. The interest and response both during and after the program was most rewarding to the student. Lively discussion of different points of the subject matter presented occurred several times throughout the program.

Professional and/or non-professional group interaction. There were many opportunities for the student to observe and/or participate in interdisciplinary activities. One such occasion was the Cleft Palate Clinic at the DuPont Institute in Wilmington. This was the largest interdisciplinary team observed by the student. A team of specialists examined the child. The team consisted of orthodontists, plastic surgeons, pediatricians, speech pathologists, medical social consultants, dentists, and nutritionists. After examining the children, the
professionals discussed the findings on each child and decided upon the diagnosis and course of therapy for that child. Each professional contributed his or her recommendations to the diagnosis and therapy. Here again, Delaware's excellent communication system played an important part in the interdisciplinary clinic. A brief description of each child's medical status was obtained from interviews, typed and sent to each professional taking part in the clinic. In that way each professional had an opportunity to prepare for each child and its special problems whether medical, social or financial.

More frequently the student observed and participated in health teams consisting of a nutritionist and a sanitarian or a nutritionist and a nurse. The student had not previously recognized the diversity of duties assigned to other health professionals. For example, Mrs. Postles and the student accompanied a sanitarian to two dairy cattle farms and a small dairy processing plant one morning. In the afternoon of the same day Mrs. Postles and the writer accompanied another sanitarian on a re-inspection of a restaurant and visited a water processing plant, a shopping mall, and a school kitchen. The opportunities of working with the other health professionals not only broadened the student's personal knowledge but also strengthened the network of communication between disciplines.

The student was fortunate to visit both large and small (four beds and under) nursing homes under review by a sanitarian and nutritionist team. Delaware had developed a team-review approach to survey large nursing homes which receive or will receive federal funds. The team consists of a sanitarian, a nutritionist, a physician, a medical
records consultant, a fire marshal, a nursing consultant, and an administrative consultant. The team reviews the nursing home, pointing out both the good and the bad features which the home has, and suggesting practical solutions which would bring the home into compliance with federal regulations. The student was very impressed with this team review approach. It provided an excellent opportunity for the health professionals to work together with an on-going business concern and bring it into compliance with federal regulations. It also provided the groundwork for health professional education in that each member of the team learned from the other members and broadened their personal knowledge.

The student had an opportunity to visit several migrant camp sites with Ms. Camile Jacobs, educator and social worker with the migrant labor force. By visiting a variety of sites, the writer had a first hand opportunity to see a variety of conditions which exist in the labor camps. The camp conditions ranged from excellent, modern buildings which surpassed the state's regulations to camps in which buildings were in desperate need of repair with only cold water available. The latter description applied to camps which had not been relicensed by public health.

The medical and nutritional services are often delivered on an emergency basis only. The Department of Health and Social Services is developing a method with which to deliver medical and nutritional services to mothers and children at these migrant labor camps. The tentative plans suggest evening clinics which the workers could attend after they have finished working for the day. These evening public health clinics would make the WIC Supplemental Food Program available to the women, infants and children at the migrant labor camps.
The student observed that the professionals worked together to reinforce information which they gave to the non-professional people with whom they were working. The student was made aware of the importance of understanding the basic terminology and standards of the other professionals on the team. The opportunity to observe an interdisciplinary team in action was a dynamic learning experience. In each case the student's knowledge and insight of other health professionals' terminology, skills, and training as well as types of services provided by that particular professional was expanded and deepened. The student also noted that the health and safety and personal dignity of all people who requested services or were inspected by the public health survey teams, was maintained and promoted by all the public health professionals.

Conferences in behalf of planning. The student held informal conferences with Miss Zickesfoose to decide which topics the student was to present at the two in-service education programs previously mentioned. The student also asked for suggestions in determining the types of approaches which might be effective with the two different groups. Two conferences were held with Mr. Johns and Ms. Hinzman concerning school lunch, school breakfast, day care, and head start programs and in-service education programs for the food service employees. This information was later used by the student in developing her presentations to both the home-health aides and the evening class. These conferences aided the student in her decisions concerning type and amounts of materials to be used with the two different groups. The planning conferences
also reinforced the planning procedures which the student had learned through her academic work.

Further confidence in the student's abilities and expertise was acquired through the planning sessions held with Mrs. Postles concerning the three lectures given at the Wilmington Senior Citizen Center for the senior citizens. These will be discussed later. The student felt the open, relaxed atmosphere of the Office of Nutrition made possible the informal conferences and consultations which took place. Very often the time spent in traveling was used to orient the student to programs or activities not mentioned to the student earlier or in discussion of some program or topic. Often special topics of interest concerning the local history or current events of Delawareans were mentioned while traveling.

The student spent considerable time planning on her own for the special project which was assigned her (see Specific Activity). The student was aware of the necessity for flexibility, new ideas, sound information and compromise in each planning situation. The student developed a sharper sense of observation of the habits and customs of the so-called Eastern Shore residents in order to plan the type of approach, material to be used, and the timing of programs presentation.

Guidance and counseling of non-professional persons. The student had several opportunities to provide dietary guidance and counseling to non-professionals. In each instance the student felt she learned as much if not more than those she was observing or counseling. Three of these experiences will be discussed. In each of these experiences, the
student learned more about cultural backgrounds and human nature. In describing these experiences, it is hoped the reader will gain some insight into the variety and scope of experiences which were planned for the student nutritionist.

The student was invited to speak with a group of Puerto Rican Headstart mothers concerning shopping tips and encouraging a greater use of and a wider variety of vegetables in their diets. The student learned from discussing with the group some of their preferences such as for rice at most main meals, the enjoyment of chicken and fish. They ate a variety of tropical fruits and tomatoes. They particularly enjoyed peppers with their meals. Their consumption of usual American vegetables and milk is low which is to be expected due to their cultural practices and food availabilities in Puerto Rico. The student encouraged comparative shopping. The student also encouraged buying fresh fruits and vegetables common in the United States when they are in season and their prices are lower. The preservation of fresh fruits and vegetables was discussed and the suggestion was made for the county extensionist to present food preservation demonstrations to the group. The student suggested food tasting parties as a means to taste a variety of vegetables which could be added to the family's meals. In this way the family cooks could experiment with foods and tastes without spending too much money. The food tasting parties consisted of several mothers and/or daughters or whoever else cooks in the family, each preparing one dish of something she had never made before and taking the dish of food to a designated home. There all the cooks sample each dish of food and talk about the taste, how to cook the food, and speculate
on whether or not their families will like the food well enough to eat it. The student felt she was effective by the amount of response and discussion by the mothers and one father at the meeting, even though the student had to work through an interpreter. This was one instance in which the student felt that weekly or even monthly talks by a nutritionist to the group would help them make a smoother transition into the American culture and help them to continue as well in using their Puerto Rican customs.

The student had the opportunity to visit with Mrs. Mullins, who serves as a registered dietitian for Beebe Hospital and as part-time public health nutritionist. Home and hospital visits were made with Mrs. Mullins. One hospital visit was particularly interesting and beneficial to the student. One of the patients referred for counseling at the hospital was an obese, arthritic, and recently diagnosed diabetic woman. The student and Mrs. Mullins jointly interviewed the woman in order to determine the meal pattern which would most likely suit her the best. We were aided in our interview by two of the lady's friends. Through Mrs. Mullins' skillful interviewing, a relatively clear picture of the woman's dietary patterns and daily exercise patterns emerged. The student participated in the interview with suggestions of foods to use and of types of exercise which could be initiated. It appeared from the woman's answers that she preferred machines to do her exercises for her because it hurt her legs to walk much. It was suggested and her friends encouraged her to try to walk to each window in her house at least once a day to start moving her body and expending energy on her own. The student is doubtful about the success of weight loss even though the woman
understood that it would help to reduce the stress on her joints as well as possibly controlling her diabetic problem. The woman did express good motivation for coordinating her food consumption and medicine intake to control the diabetes.

The student accompanied a public health nurse on a home visit to an Amish home. A young mother (approximately 25 years old) had delivered her third child five days prior to the visit. It was the mother's first home delivery, and the student's first visit into an Amish home. The nurse checked the infant and mother and asked if she had had any problems or needed anything. The young mother said very little, only answering when necessary and not volunteering any information. The student inquired as to the mother's appetite and those of her children. The student did not persist in her questioning when the mother failed to respond, because the nurse had warned the student to be careful in the handling of this Amish mother. The nurse had just begun to win the mother's confidence and was cautious to maintain the relationship. The student was very interested in learning more about the Amish and their culture from this brief introduction to it during the home visit. The student was delighted to have the opportunity to visit a commercial establishment in Pennsylvania which conducts tours in an Amish farmhouse and farm for tourists. The student learned a few of the reasons behind the preservation of their unique culture.

Experiences such as these were excellent in the student's opinion. The student had the opportunity to blend theory and practical application with the patient's idiosyncrasies whether in the hospital, the home, or in other settings.
Analysis of Participation in a Specific Activity

A request was made to the Office of Nutrition for three fifteen-minute talks on nutrition to be presented as part of the on-going educational programs for senior citizens at nutrition sites. It was decided that Mrs. Postles and the student would prepare and present three talks each at two different nutrition sites. The request for the talks was made by Mrs. Steinrock, the dietitian working with the New Castle County Nutrition Sites for Senior Citizens. Mrs. Steinrock requested the talks to cover special diets, health foods, and fad diets, and food facts and fallacies. These topics were suggested by Mrs. Steinrock because they had not been discussed with the senior citizens before and because Mrs. Steinrock felt the senior citizens expressed interest in hearing these topics.

The senior citizens at the Senior Citizen Center were middle to upper middle class citizens with a wide variety of educational and career backgrounds. The senior citizens were mobile and appeared to be in good health. They were not overly concerned with their diets.

Developing and planning. The student attended the Wilmington Senior Center Project Council meeting as well as visiting several nutrition sites for senior citizens before the request for the talks was made. The student met with Miss Frystacki who explained the background history, current standing and guidelines to be followed in the senior citizen nutrition sites which are federally funded. The student also attended a meeting in which state and federal officials explained the new intermediate care regulations for nursing homes which desire to receive
The regulations are primarily concerned with safety, sanitation, and activities of the intermediate care resident. Thus the student observed both the institutional and non-institutional services available for the senior citizen. The student then surveyed the available literature concerning the nutritional habits of the elderly population. Mrs. Postles and the student held several informal conferences to develop the topic outlines for the lectures from *Nutrition Education for the Elderly* (9). The lecture outlines are included in the Appendix. It was decided to work from an outline form with a few brief notes in order to keep audience interest and participation levels high.

The majority of nutrition feeding sites are located in the center-city areas of Wilmington in area churches and in the Senior Citizen Center. They are open to all senior citizens of Delaware. Delaware is in the process of developing transportation systems for the elderly to promote their self-sufficiency. The senior citizens come to the centers and sites for noon meals, but are very often at the centers for social and educational programs during the day. Their activities range from square dancing to bingo to yoga to traveling. The writer can vouch for the popularity of bingo which is played for a penny a card a game.

**Participation.** The first presentation covered health foods and food fads. Twenty-five elderly women, ten elderly men and fifteen middle-aged workers attended the talk. The presentation was given on an informal basis and the audience was encouraged to ask questions or make comments at any time. The student talked the first seven minutes at which time she elicited responses from the audience. The senior citizens began
asking questions and the last part of the talk was predominantly questions, answers, and comments. The senior citizens were interested and asked a variety of questions. They also commented on the food prices, varying can weights, and hard-to-read labels. The student felt the talk was very successful, based on audience participation.

The second talk concerning special diets was unsuccessful. It was conducted in the same manner as the first talk. Approximately thirty-five elderly women and fifteen elderly men attended the talk. The majority of the audience was uninterested in special diets because they were making preparations to play bingo and because they were not on a modified diet. A few individuals were interested in those food items which affected them personally but on the whole they felt they knew their own eating habits and restrictions well enough to see them out the rest of their days. After consulting Miss Zickefoose about the outcome of the presentation, the student concluded that the scheduling of the presentation conflicted with the usually scheduled bingo game. The student concluded that the older citizens' priority in activities at this center was bingo at which they could win money.

The third talk concerning food facts and fallacies was successful. Approximately forty elderly women, fifteen elderly men and ten workers attended the talk. The presentation format was changed so that the student directed the audience into actively responding and asking questions concerning the food superstitions they learned during their lives. The most prevalent questions dealt with supposedly "poisonous combinations" of foods (such as dairy products eaten during the same meal with seafood products) and with the use of wine or beer with meals. Many of the food
superstitions were acquired from their parents or friends. The food superstitions combined with the limited or fixed income provide fertile ground for nutrition misinformation and too severe self-prescribed food restrictions. For these reasons the student was delighted with the active responses from the audience to the many questions and food superstitions mentioned.

_Self evaluation of performance._ The student was satisfied with her performance during the presentations, especially the last talk. The last talk, structured as it was, promoted an excellent exchange of ideas and information between the audience and the writer. The writer felt comfortable with the audience and the material covered. She noted that building and maintaining rapport was essential in keeping the senior citizens interested and actively participating in the talks. The student found she needed to tailor the talks to the senior citizens so that the talks were light, lively, and involved the senior citizens in asking questions or telling what they personally did with foods during a normal week. The student felt she had encouraged good food practices but recognized the fact that the senior citizens were not going to change lifelong habits over night.

The student also felt she had learned much from the audience concerning their feelings on food topics and their activity priorities. The student found her particular audience was participation oriented. They desired to be actively involved in the presentations. The material in the presentations was covered rapidly to take the best advantage of the limited time available for the talks and to take advantage of the
rapid interest changes of the audience. The student noted on the last presentation in particular, that the senior citizens responded more quickly and asked more diverse questions than did the middle-aged workers. From speaking with the Senior Center Project Director, the student learned that the typical senior citizens using the Center were active in community and civic affairs. The Project Director mentioned several programs or activities which had been very successful in the past, such as a frank discussion with a lawyer concerning death, the legalities of wills, and death expenses, square dancing, musical performances by church youth groups, and craft courses. The student nutritionist deduced that the senior citizens with whom she spoke before and after the presentations were not overly concerned with their personal health but rather were more interested to hear if the nutritionist's information agreed with their knowledge and opinions.
CHAPTER VI

SUMMARY OF FIELD EXPERIENCE

Delaware was an ideal state for the student to get an overview of state public health activities. The services and regulations were tailored to the state's unique blending of agricultural and industrial centers, large city and small towns, of resident and non-resident populations. The programs and services were often conducted on a state-wide level because of the short distances and relatively small populations involved. This gave the student an excellent opportunity to see the programs which had been developed at the state level and to then view the same programs tailored to fit the actual service sites across the state.

The student was delighted to find that the methods and techniques she had been taught and that she had learned over the course of her summer field work were applicable not only in East Tennessee but also in Delaware. The student also learned much about nursing skills and duties in her Tennessee field work and noted that immunizations and family planning examinations were still done primarily by the physician in Delaware, whereas in Tennessee they are being done more and more by the nurses.

The student felt she gained a better understanding of the roles and duties of the other professionals in the field of public health through informal conferences with them and through observing them in action during team surveys and inspections. Throughout the entire field experience, the professionals encouraged the student to ask questions.
concerning any part of their services or activities as well as encouraging the student to participate in the service or activity.

The student learned much about the area customs and traditions of Delawareans by attending local area events. The student also learned that the peoples of Delaware have much in common with the peoples of Tennessee in the ways of interests, hobbies, concerns and national and state feelings.

The student gained poise and confidence in working with professional and non-professional people both individually and in groups. The student's confidence in her abilities was greatly enhanced by the offer of a position as a Delaware county nutritionist.

The guidance and counseling of the Office of Nutrition staff was most helpful in broadening the student's philosophy and practical experience in public health nutrition. The student is looking forward with renewed enthusiasm to the contributions which she will make in the field of public health nutrition.
LITERATURE CITED


6. Division of Economic Development. Discover Wonderful Delaware! Delaware State Development Department, Dover, Delaware.


APPENDIX A

JOB DESCRIPTIONS OF NUTRITION SECTION

Nutritionist I

Characteristics of the Class: Under general supervision, is responsible for work of average difficulty, in providing nutrition consultative services to nursing homes, state agencies and institutions; and performs related work as required.

Examples of Duties: Provides nursing homes and other facilities with consultation of food service, dietary program, food costs, menu evaluation and related matters; gives talks for the promotion of good nutrition; participates in in-service training and workshops; writes and issues newsletter on nutrition information; gives nutrition consultation to public health and other nursing personnel, individuals and others; assists in training of others in public health nutrition; writes evaluations of food service operations of facilities visited; helps formulate exhibits and other visual aids.

Minimum Qualifications: Training and experience—Graduation from an accredited college or university with a bachelor's degree in nutrition, dietary or food management fields. Knowledge, abilities, and skills—Good knowledge of the principles and practices in the field of food and nutrition; some knowledge of the functions of health and welfare agencies. Ability to provide nutrition consultative services to a variety of institutions, facilities and individuals; ability to instruct in matters of nutrition; writing ability.
Nutritionist II

Characteristics of the Class: Under direction of the Nutritionist III, is responsible for the Public Health Nutrition Program within a large and heavily-populated geographical area and/or the conduct of the nutrition component of a specialized program such as maternal and child health; and performs related work as required.

Examples of Duties: Inspects and evaluates large group care facilities located throughout the State for licensure; plans for and provides consultation and assistance to administrators and staff of assigned group care facilities on menu planning, diets, food preparation and service, space and equipment needs, and personnel training; acts as liaison between the nutrition unit and the specialized program officials; coordinates the specialized nutrition program with the overall nutrition program; plans, develops, conducts and evaluates programs pertaining to the use of Government donated foods; provides consultation service to, and maintains cooperative relations with civic, educational, governmental and other groups concerned with food and nutrition in assigned area; plans, prepares, and conducts in-service educational programs in nutrition for professional and allied health staff in the geographic area and/or specialized program; participates in planning for and supervises the public health field experience for graduate students studying nutrition; prepares, reviews, and selects nutrition informational materials for dissemination; makes home visits with Public Health Nurses to provide and evaluate nutrition services, such as diet counseling for persons with specific food and nutrition
problems; participates in the development of State proposals for Federal
nutrition programs; plans, develops, tests and evaluates educational
materials utilized in nutrition programs.

Minimum Qualifications: Training and experience—Graduation from
an accredited college or university with a master’s degree in Nutrition,
dietary or food management fields; or graduation from an accredited
college or university with a bachelor’s degree in nutrition, dietary
or food management fields and one year of experience in the field of
nutrition. Knowledge, abilities, and skills—Thorough knowledge of
licensing requirements for institutional food service facilities; good
knowledge of human nutrition and its relationship to health and disease;
good knowledge of the principles and practices of institutional nutri-
tion and food service management; good knowledge of principles of con-
sultation; some knowledge of community resources in public health nutri-
tion; some knowledge of social, cultural, and economic factors of in-
dividuals and families as they apply to public health nutrition; some
knowledge of educational principles and methods as applied to public
health nutrition practices. Ability to analyze, evaluate, and interpret
institutional nutrition data and available services; ability to plan and
recommend policy; ability to plan and provide direct nutrition consulta-
tive services to a variety of institutions, agencies and individuals;
ability to plan and organize work effectively and independently; ability
to instruct in matters of normal and therapeutic nutrition; ability to
prepare acceptable materials for dissemination; ability to present ideas
clearly and concisely, orally and in writing.
**Nutritionist III (Consultant)**

Characteristics of the Class: Under direction, is responsible for planning, organizing, developing and directing a public health nutrition program; and incumbent supervises a small staff of professional nutritionists; and performs related work as required.

Examples of Duties: Plans and takes part in consultation services to local institutions; assists in planning and takes part in programs of in-service training and workshops for public health workers, school lunch workers, homemaker groups, headstart and others; integrates the nutrition service with other programs of the board of health; supervises and takes part in the development of nutrition educational materials; supervises and trains personnel; writes and submits reports; supervises staff engaged in providing consultation service on nutritional aspects of the public health program.

Minimum Qualifications: Training and experience--Graduation from an accredited college or university with a master's degree in nutrition, dietary or food management fields and one year of public health nutrition experience; or graduation from an accredited college or university with a bachelor's degree in nutrition, dietary or food management fields and two years of experience of the type specified above. Knowledge, abilities, and skills--Considerable knowledge of the principles and practices in the field of food and nutrition; good knowledge of public health nutrition; good knowledge of the methods of nutrition education; good knowledge of supervision. Thorough knowledge of licensing requirements for institutional food service facilities. Ability to plan and provide
nutrition consultative services to a wide variety of institutions, facilities and individuals; ability to instruct in matters of nutrition; ability to communicate effectively, both orally and in writing; supervisory ability.
APPENDIX B

CLASS AT UNIVERSITY OF DELAWARE PRESENTATION

I. Brief History of School Lunch Program Development
   A. European Influence
   B. United States

II. The Programs Today
   A. National School Lunch Program
      1. Type A Lunch
   B. School Breakfast Program
      1. School Breakfast Requirements
   C. Special Food Service Programs for Children
   D. Special Milk Program

III. Reimbursement Rates for Various Programs in Delaware
   A. School Lunch Program
   B. Breakfast Program
   C. Special Food Service Programs

IV. Nutrition Education
   A. Nutrition Education Programs for K-3rd Grades
   B. Nutrition Education Programs for Food Service Workers
      and Supervisors in Schools, Headstart and Day Care Centers
      1. Training Series of Four Units
      2. Two Year Associate Degree in Food Service Manage-
         ment Technology
APPENDIX C

HOME-HEALTH AIDES PRESENTATION

Purpose - To explain basic nutrition principles.

Handout - Family Fare a Guide to Good Nutrition.

I. Food at Work for You
   A. How to Use the Daily Food Guide
      1. Nutrients
      2. Food Energy Maintaining Desirable Weight

II. Tips on Meal Planning
   A. Servings and Pounds
   B. Smart Buying
   C. Wise Storing

III. Food Preparation
   A. Ingredients and Measurements
   B. Meal Planning
   C. Recipes
Health Foods and Fad Diets

Purpose - To emphasize the importance of good, basic nutrition through the discussion of health foods and fad diets.

I. Health Foods
   A. Health foods vs. store foods
   B. Costs of health foods vs. grocery store foods

II. Nutrient Supplements
   A. Vitamins E, A, and C.
      1. What they are
      2. Requirements
      3. Toxicity of overdose
      4. Food sources
   B. Minerals - potassium, sodium, and iron
      1. What are they
      2. Requirements
      3. Food sources

Special Diets

Purpose - To help the individual with small problems they may be having with special diets.

I. Labels
   A. Information on labels
   B. What the information means
II. Diets
   A. Words on labels
      1. Diabetic
      2. Dietetic
   B. Seasonings which can be used.

Food Facts and Fallacies

Purpose - To bring to light the truth about some of the accepted "facts" concerning foods.

I. Food Sayings Learned During Life

Examples: White eggs are better than brown eggs.
          (Color of shell depends on the breed of chicken)
Beer and oysters eaten in combination are poisonous.
          (This food combination is not poisonous to the normal individual if the food items are not contaminated by harmful microorganisms or other extraneous material)

II. Believe them? Why or Why Not?

   A. Digestion process
   B. Individual reaction to various foods
Teresa Ann Thompson was born to John S. and Elizabeth A. Thompson on December 4, 1951, in Oak Ridge, Tennessee. She attended Pine Valley Elementary School, Jefferson Junior High School, and graduated from Oak Ridge High School in 1969. The following September, she entered the University of Tennessee, Knoxville, and in June, 1973, she received a Bachelor of Science degree in Nutrition. During the summer of 1973, she worked as a volunteer nutritionist in Hamblen, Jefferson, Cocke, and Grainger counties in Tennessee under the supervision of Miss Melba Mensch, Tennessee Public Health Regional Nutrition Consultant, and Mrs. Rena Mills, Nurse Supervisor for five East Tennessee counties. In September, 1973, she accepted a Maternal and Child Health Service, Department of Health, Education and Welfare, training grant to begin study towards a Master of Science degree in Public Health Nutrition at the University of Tennessee, Knoxville. She received this degree in August, 1974.