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Field Observation and Experiences in the Division of Nutrition - Ohio Department of Health

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I am submitting herewith a thesis written by Nancy Luce Young entitled "Field Observation and Experiences in the Division of Nutrition - Ohio Department of 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.

Mary Nelle Traylor, Major Professor

We have read this thesis and recommend its acceptance:

Frances A. Schofield, Cyrus Mayshark

Accepted for the Council:

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(Original signatures are on file with official student records.)

103

July 28, 1971

To the Graduate Council:

I am submitting herewith a thesis written by Nancy Luce Young entitled "Field Observation and Experiences in the Division of Nutrition - Ohio Department of 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.

Mary Nell Taylor
Major Professor

We have read this thesis and recommend its acceptance:

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FIELD OBSERVATION AND EXPERIENCES IN THE DIVISION OF
NUTRITION - OHIO DEPARTMENT OF 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
Nancy Luce Young
August 1971

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ABSTRACT

Nutrition is an integral part of life and health. Textbooks and academic training in nutrition need to be supplemented with practical experience in the community in order to round out a nutritionist's training. The eight-week field experience in a health agency was planned to increase the breadth of the student nutritionist's previous experience and academic training and to prepare her to assume a leadership role in the application of nutrition in public health.

The field experience with the Nutrition Division of the Ohio Department of Health was designed to enable the student to observe and participate in applied nutrition in Ohio. The student attended meetings and participated in activities with the Chief of the Nutrition Division, the Institutional Dietary Consultant, a district nutritionist, and other health department personnel. Since the health department is not the only agency providing nutrition services, the student was able to interview, observe, and work with nutritionists from various other agencies. Examples of experiences included participation in a school dietary survey, a planning meeting for teaching elementary school teachers how to incorporate nutrition into their curriculum, and several nursing home consultations.

Through these experiences the student nutritionist was able to observe nutritionists planning, coordinating, implementing, and evaluating programs jointly with other professionals and laymen to provide comprehensive health services in Ohio. The experience provided the

student with an overview of the total state health program and the role of nutrition in that program. By participating in the nutrition program the student developed increased confidence in her ability to apply her academic training and developed professional attitudes and skills necessary for a public health nutritionist.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. FACTORS WHICH DETERMINE THE POLICIES AND PROGRAMS OF THE	
OHIO DEPARTMENT OF HEALTH	3
The Nature of the Population	3
Biostatistics	3
Economic characteristics	6
Political considerations	9
Health manpower	10
The Nature of Public Health in Ohio	10
Bureau of General Services	14
Division of Administration	16
Division of Legal Services	16
Division of Medical Facilities	16
Division of Vital Statistics	16
Bureau of Public Health Laboratories	17
Bureau of Preventive Medicine	17
Division of Chronic Disease	17
Division of Communicable Disease	18
Division of Maternal and Child Health	18
Division of Dental Health	19
Division of Tuberculosis	19
Bureau of Environmental Health	19

CHAPTER	PAGE
Bureau of Local Services	20
Division of Nursing	20
Division of Public Health Education	20
Division of Local Services	21
Division of Nutrition	21
The Nature of Nutrition Services	21
History	21
Programs	23
III. AN ANALYSIS OF THE FUNCTIONS OF A PUBLIC HEALTH	
NUTRITIONIST	27
Planning	28
Coordinating	30
Consulting	32
Teaching	36
Evaluating	39
IV. SUMMARY AND EVALUATION	43
BIBLIOGRAPHY	45
VITA	48

CHAPTER I

INTRODUCTION

Air, water, and food are the basic essentials of human life. Nutrition (food) is an integral part of life from birth to death, in both sickness and health. Many professional disciplines have assumed some responsibility for nutrition but far too often have assigned it a low priority in relation to their other concerns. Nutritionists and dietitians are the only professionally educated persons whose primary responsibility is the application of nutrition science to the care of people (1). An eight-week field experience in a health agency is intended to increase the breadth of the student nutritionist's academic experience and better prepare her to assume a leadership role in the application of nutrition. This breadth should be expressed in the form of increased competence in the field of nutrition as well as in greater self-confidence in her ability to apply her academic knowledge.

Since nutrition has many applications it is important to see how various people have established and/or organized their nutrition programs, and what factors within the community affect the program. Therefore, considering the geographic, economic, political, and social factors in Ohio is important in order to see more clearly the environmental influences.

The objectives of the eight-week supervised field experience were:

1. To study the ecology of the state as it relates to the health and nutritional needs of the people.

2. To observe the structure and function of the Ohio Department of Health.

3. To observe how nutritionists function within this organization as a part of the health team.

4. To see how the Division of Nutrition relates to other divisions within the Ohio Department of Health and how it relates to other agencies and organizations outside the department.

5. To provide an opportunity for the student to evaluate her performance in such an environment.

The report of the student's field experience is divided into four chapters. Chapter II is an analysis of the factors which determine the policies and programs of the Ohio Department of Health. Chapter III is an evaluation of the performance of the student nutritionist in relation to abilities needed in public health nutrition. Chapter IV is a summary and evaluation of the student nutritionist's learning experience.

CHAPTER II

FACTORS WHICH DETERMINE THE POLICIES AND PROGRAMS OF THE OHIO DEPARTMENT OF HEALTH

A necessary basis for evaluation of the health needs of a state is an appreciation and understanding of its history, present circumstances, and some of the factors affecting present and future needs. As the people and conditions change so do their health needs. Part I of this chapter examines the nature of the people; part II looks at the nature of public health in Ohio; and part III emphasizes the nutrition component of the health problems and programs.

I. THE NATURE OF THE POPULATION

Ohio, the seventeenth state to be admitted to the Union, is located in the north central part of the United States, and is bounded on the east by Pennsylvania, on the west by Indiana, on the south by Kentucky and West Virginia, and on the north by Michigan and Lake Erie. With an area of 41,222 square miles Ohio is about one-fourth the size of California, thirty-four times the size of Rhode Island, and compares in size with such states as Virginia, Pennsylvania, New York, and Kentucky. The climate is temperate and well suited for agriculture and industrial development.

Biostatistics

Ohio's 10,652,017 inhabitants are spread out unevenly over the state. Most live in an urban belt running diagonally across the state.

connecting Ohio's three largest cities--Cleveland, Columbus, and Cincinnati. Seventy-five percent of the population in 1970 lived in urban areas, an increase over the 73.4 percent in 1966 (2).

In the past 10 years Ohio's population has increased 9.7 percent. The greater part of this growth was due to natural increase aided by some migration. The 1969 birth rate showed an increase of almost 2 percent over the 1968 level. However, in the years since 1957 the birth rate has steadily decreased from 26.3 to its lowest level of 17.2 live births per 1,000 population in 1967 and 1968. Of the 189,099 live births in 1969, 15 percent were born to teenage mothers. Significantly, for 20 percent of these teenage mothers this was at least their second child and for some it was their fifth (3). The implication in terms of teenage nutrition is real and immediate.

In 1957 the death rate in Ohio was 9.8 deaths per 1,000 population. Since then it has remained fairly constant, and in 1969 it was 9.4 deaths per 1,000 population. This is comparable to the national death rate from all causes which was 9.5 in 1969. During the 1960's diseases of the heart continued to be the leading cause of death, followed by malignant neoplasms and cerebrovascular diseases. The rates are similar for most of the ten leading causes of death over this 10-year period, as indicated in Table I. However, there are two notable exceptions. A 77 percent increase in deaths from bronchitis, emphysema, and asthma was observed in this period. Also there was a significant decrease in deaths in early infancy (3).

The leading cause of infant deaths was congenital anomalies,

Table 1
 Leading Causes of Death in Ohio and United States
 (Rates per 100,000 Population)

Causes of Death	Ohio		U.S.**
	1960*	1969*	1969
All Causes	957.8	936.1	950.0
Diseases of Heart	370.5	371.2	364.1
Malignant Neoplasms	154.6	162.2	160.1
Cerebrovascular Disease	112.7	104.2	102.0
Accidents	44.4	54.5	56.0
Influenza and Pneumonia	29.8	28.9	34.7
Diabetes Mellitus	22.9	22.8	18.5
Certain Causes of Mortality in Early Infancy	34.3	20.7	20.9
Arteriosclerosis	23.9	18.0	16.7
Bronchitis, Emphysema, and Asthma	9.8	17.4	15.6
Cirrhosis of Liver	12.0	13.4	15.0

*Ohio Department of Health 1969 Vital Statistics. Ohio Department of Health. Columbus, Ohio.

**Department of Health, Education, and Welfare 1970 Monthly Vital Statistical Report. 18:13.

particularly of the heart, followed by pneumonia and accidents. Twenty-five percent of neonatal deaths are due to asphyxia of the newborn. The maternal death rate has been decreasing steadily to its present level of 2.3 deaths per 10,000 live births. Of the 43 maternal deaths in 1969, 16 percent were due to toxemias of pregnancy (3), something that medical and dietary supervision usually prevent. Several of the 10 leading causes of death have definite nutritional components in the prolongation of life and the prevention of complications.

Racially, Ohio is 10 percent black. This percentage is increasing faster than the population generally, especially in the larger cities (4).

Economic Characteristics

Ohio is located between the industrial East and the agricultural Midwest, sharing in the advantages of both. Her agriculture is characterized by its diversity and its proximity to market areas. Land resources combine with a favorable climate to provide Ohio with an environment of varied economic opportunity. Even though the number of farms is declining at the rate of about 3 percent each year, Ohio farmers still gross \$1.3 billion from the sale of farm products. In the production of vegetables grown under glass and in total greenhouse area used for horticulture, Ohio ranks number one in the nation. Tomatoes are such an important crop in Ohio, with the state ranking second in the nation in the production of fresh and processed tomatoes, that in 1965 former Governor Rhodes proclaimed tomato juice the state beverage. Corn is still the big money maker and most of western Ohio is considered part of the Corn Belt (6).

The shape of the economy of Ohio is changing as it is all over the United States. Formerly agriculture was the leading source of income for the workers in Ohio; it was the state's leading industry and most of the people were rural. Now the situation is reversed. Nearly four out of ten Ohio workers, representing the largest single segment of the labor force, are engaged in manufacturing. Ohio's most important industries, as measured by employment include: the nonelectrical machinery industry; the automotive and aircraft industry; steel and nonferrous metal industry; and the electrical machinery industry (7).

Ohio is one of the nation's wealthiest states, ranking third in the nation in manufacturing. In 1969 Ohio ranked fifth in personal income and sixteenth in personal income per capita (8). The state's income is received from a variety of sources with manufacturing contributing the largest share and farming and mining the smallest (Figure 1) (7). Despite Ohio's wealth it ranks thirty-sixth in combined state and local spending per capita and fifty-first of all the states and the District of Columbia in taxes per \$1,000 personal income, according to a report of government finances for 1968-69 (9).

In 1970, the monthly average of Ohioans receiving public assistance was 417,280, or about 4 percent of the population (10). Of these, 57 percent were children under working age; 16 percent were mothers or grandmothers with child-care responsibilities; 13 percent were retired or elderly persons; 8 percent were disabled, blind, or mentally incapacitated; 5 percent were mothers or grandmothers who work full or parttime or who were enrolled or waiting for enrollment in job training programs.

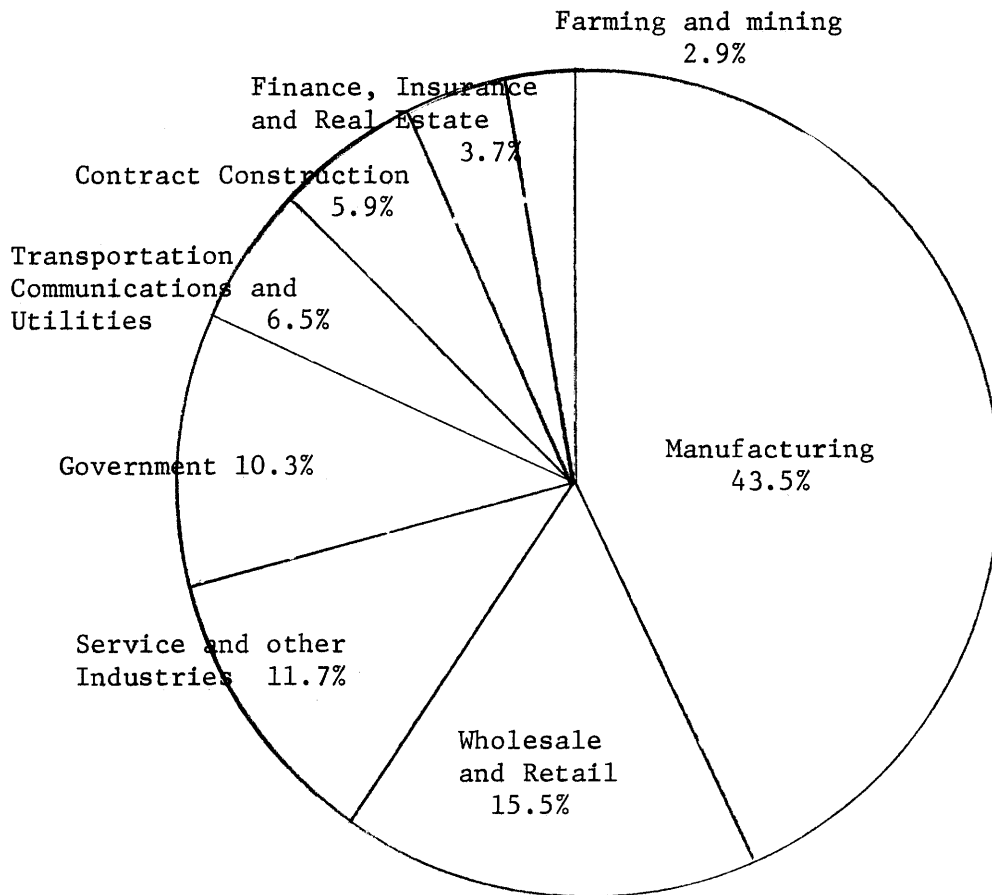


Figure 1. Sources of state income.

Source: Economic Research Division 1970 Statistical Abstract of Ohio 1969. Development Department. Columbus, Ohio.

Contrary to popular belief, only 1 percent were currently unemployed fathers who might become employed. Ohio like many other states still pays only 80 percent of its own minimum standard to mothers receiving aid to dependent children. For a family of four the maximum now received is \$2,400 per year compared to the \$3,000 which the welfare department says is Ohio's poverty line (10).

Migrant workers are an integral part of the agricultural economy of Ohio. In 1970 migrants were employed in at least 33 counties, mostly in the northwestern part of Ohio. The large flood of migrants occurs late in the summer, dwindling to almost nothing by December. Problems of inadequate housing, sanitation, nutrition, education, and health usually accompany them (11).

Political Considerations

Ohio is an autonomous or "home rule" state; therefore a large portion of the responsibility and authority for providing health service is assumed by the local health departments. Exceptions include nursing home licensure and inspection, collection of statewide vital statistics, provision of public health laboratory services, communicable disease control, and certain phases of sanitation. "Home rule" means that each incorporated town can decide whether or not it wants its own health department. Cuyahoga County, for example, contains four local health departments in addition to the Cleveland City Health Department and the Cuyahoga County Health Department. Other counties in Ohio have similar problems so that Ohio's 88 counties have almost 300 separate health

departments. This is an improvement over the situation in 1918 when the state had 2,158 health departments.

Health Manpower

Health manpower is a problem in Ohio just as it is across the country. The most recent national health statistics (Table 2) show that Ohio has a lower ratio of physicians, dentists, and dietitians than the nation as a whole (12).

Ohio's licensed physicians totaled 19,278 in 1969, but only 12,000 of these are practicing in the state, a ratio of one doctor for every 883 Ohioans (13). Dentists average one dentist per 1,350 population in 1971 (14). There were 59,683 registered nurses in Ohio in 1971 (15). Of the state's 1,200 dietitians, approximately 50 worked in public health in 1971, either in state, regional, county, city, or demonstration project positions. These statistics are illustrative but do not give a true picture of the manpower shortage because of the unequal distribution of professionals across the state and because not all of these licensed professionals are currently employed.

II. THE NATURE OF PUBLIC HEALTH IN OHIO

Public health services in Ohio began in 1834 when the General Assembly authorized the cities of Cincinnati and Columbus to establish boards of health. In 1841 Dayton followed with Cleveland, Springfield, and Zanesville receiving similar authority in 1850. Other local communities followed as an epidemic or other crisis made an organized health department necessary. These local health departments were not

Table 2
 Number of Health Professionals in Relation to Population
 (Rates per 100,000 Population)

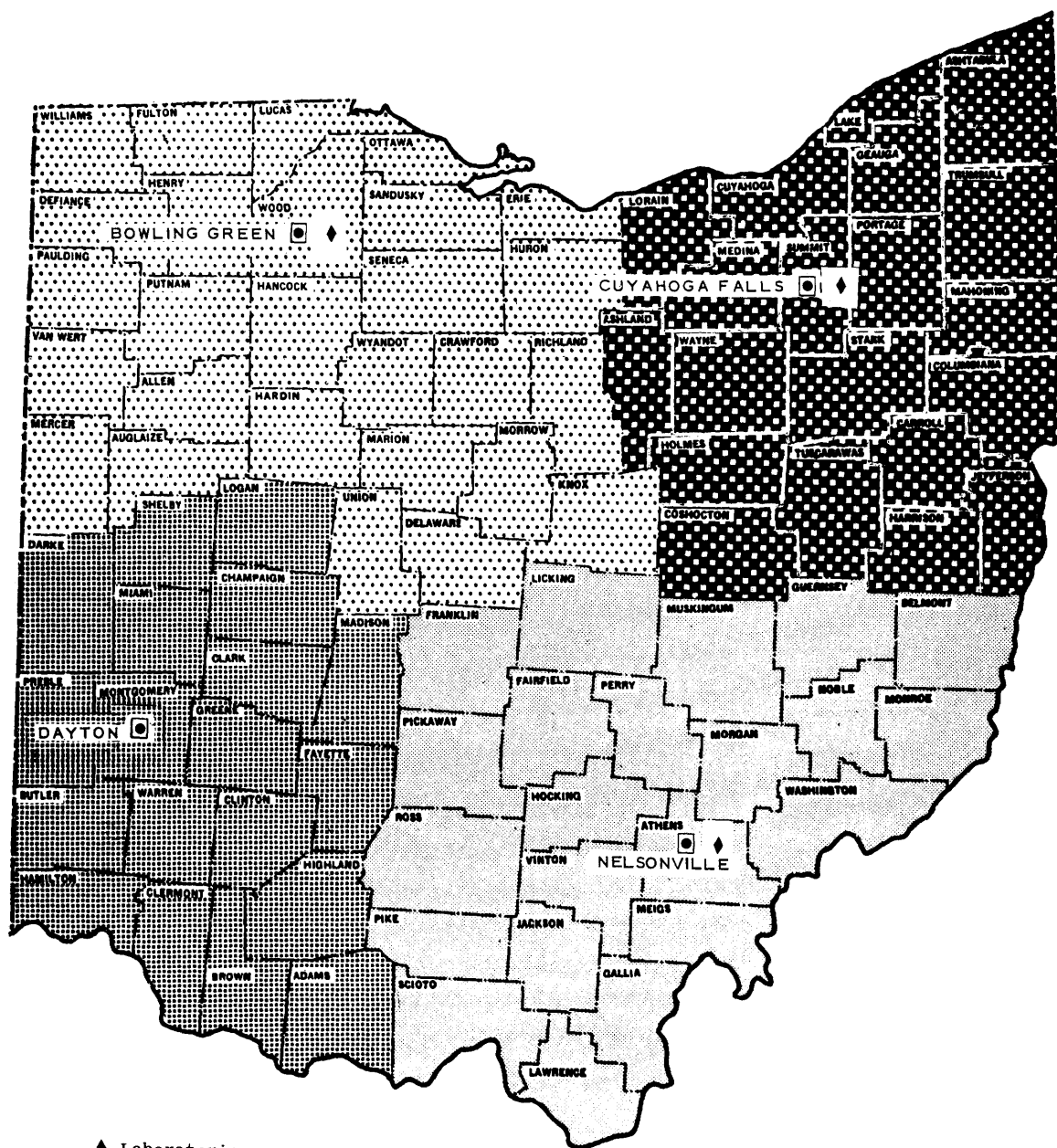
Health Professionals	Ohio	U.S.
Physicians (1967)	141	151
Dentists (1968)	42	47
Dietitians and Nutritionists (1960)	14	15
Nurses (1966)	315	313

Source: National Center for Health Statistics 1970 Health Resources Statistics 1969. U.S. Department of Health, Education, and Welfare. Rockville, Maryland.

in continuous existence but were organized and discontinued as necessity demanded. It was only after the organization of the Ohio Board of Health in 1886 that municipalities generally took an interest in establishing their own permanent boards of health. Actual authority of the new Ohio Board of Health was so limited at first that it interpreted its functions as primarily educational. By 1912 the Ohio Board of Health was large enough to be divided into divisions. This board was abolished in 1917 and the State Department of Health, consisting of a Public Health Council of four members and a Director of Health, was created in its stead. Since then the department has continued to expand, taking on new responsibilities with each session of the State General Assembly.

The organization and administration of the Ohio Department of Health was originally centralized but in 1950 it was decentralized with the establishment of five districts. In 1955, these five were reduced to four districts (Figure 2), and the district office is situated as near a large university as possible. This decentralization seems to facilitate a clearer understanding of health problems and needs in the local health units (16).

Presently, the Public Health Council consists of seven members appointed by the Governor, on a rotating basis, for seven-year terms. The Governor also appoints the Director of Health but at the time of this field work, he had not yet exercised this privilege. Acting as a regulatory body for the Ohio Department of Health, the council advises and consults with the Director of Health on matters affecting public health administration and has quasi-judicial powers.



♦ Laboratories

◻ District Offices

Figure 2. Administrative divisions (districts) of Ohio Department of Health.

Source: Ohio Department of Health 1968 Directory of Services. Ohio Department of Health. Columbus, Ohio.

Three large federally funded programs, Comprehensive Health Planning, Health Insurance Benefits Program (Medicare), and the Nursing Home Program, are directly responsible to the Director of Health. These programs were added at this level because they did not fit within the state's bureau structure (17).

Comprehensive Health Planning (CHP) is the state's health planning agency. Through the Ohio Department of Health the Governor charged CHP "to plan for maximum efficiency in the use of presently available resources, including manpower, facilities, and the latest research data, and to plan future development and expansion." Presently, 81 of Ohio's 88 counties are included in this program (18).

Medicare is responsible for the inspection and certification of medical facilities for participation in the Health Insurance for the Aged Program as provided in the 1965 Amendments to the Social Security Act. Originally nursing home licensure was the prerogative of the Department of Welfare, Division of Social Administration. In 1959 this program was transferred to the Ohio Department of Health. The Nursing Home Program includes licensing of all nursing homes and homes for the aged, even those participating in Medicare.

Administratively, the department of health is divided into five bureaus. This structure is the result of the most recent reorganization in 1964. Figure 3 is the organization chart for the five bureaus. The chief of each bureau is responsible to the Health Director.

Bureau of General Services

Four divisions make up the Bureau of General Services. Each

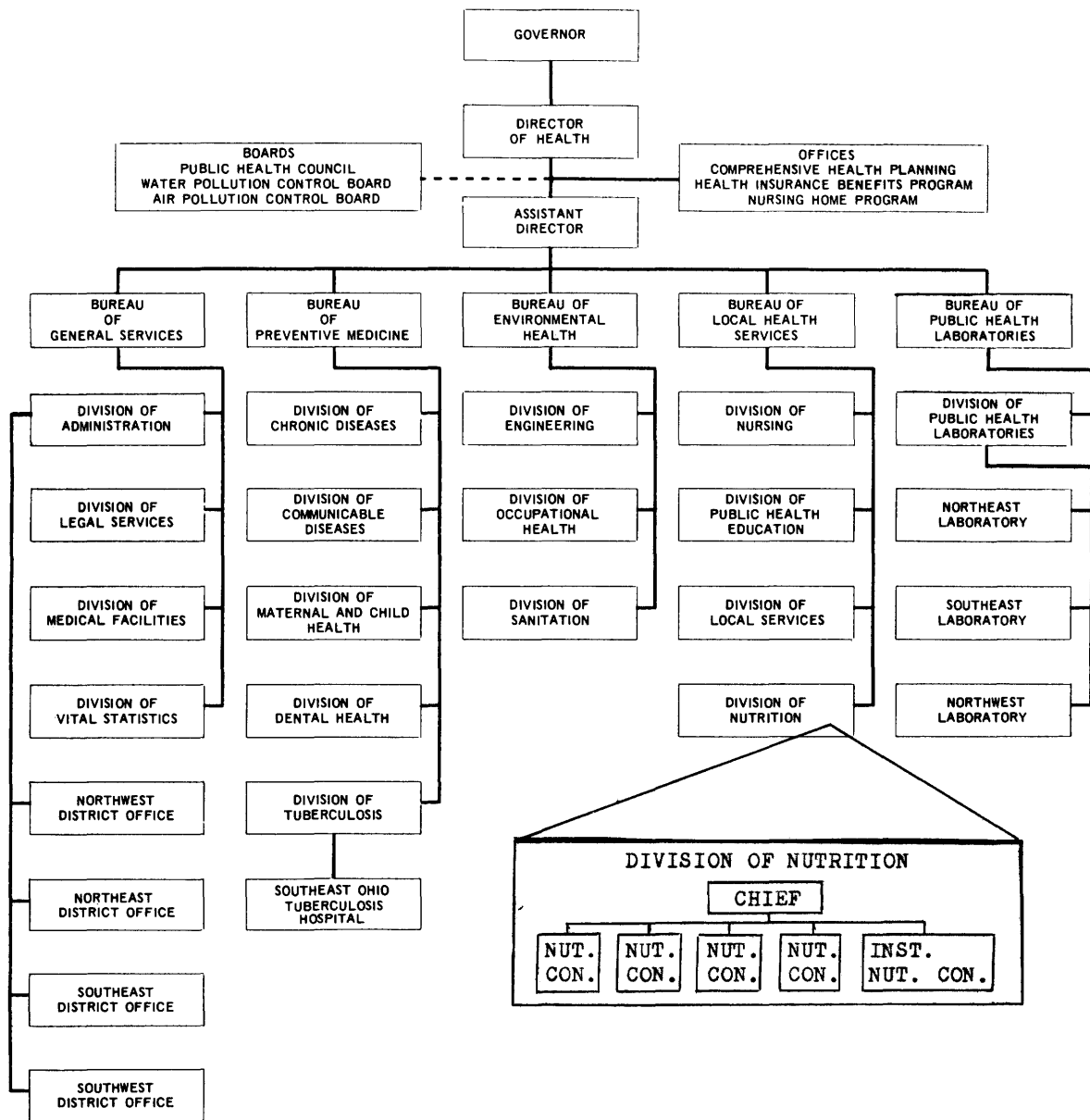


Figure 3. Placement of nutrition in the Ohio Department of Health.

Source: Ohio Department of Health 1968 Directory of Services. Ohio Department of Health. Columbus, Ohio.

division provides supportive services for the whole department of health.

Division of Administration. The supportive services provided by the Division of Administration are in the areas of finances, property, records, and personnel. The Training Unit functions within this division for orientation and further training of staff. Most of these services are for the state department of health and consultation is available to the local health units on request. Since most of the direct services of the health department are local, the state provides consultants at the district level. These persons are administratively responsible to this division.

Division of Legal Services. The Division of Legal Services provides the services of a lawyer to the state department of health and to a lesser extent to the local health districts and other political subdivisions of the state in matters related to public health. These services also include working with the Attorney General and legislators on needed public health laws.

Division of Medical Facilities. Through the Division of Medical Facilities the Ohio Department of Health administers the Hill-Burton program for hospital and nursing home construction. As many new facilities have been built the need for health personnel, including dietitians, has expanded accordingly.

Division of Vital Statistics. The Division of Vital Statistics codes, tabulates, interprets and publishes morbidity, mortality, and

natality statistics for the use of the state. In addition to maintaining the tuberculosis and venereal disease registers and other records, this division also provides consultative services to local health departments.

Bureau of Public Health Laboratories

Across the state of Ohio the department of health maintains one central laboratory and three branch offices. These laboratories are administered by the Bureau of Public Health Laboratories and serve as the reference laboratories for the state, rendering much of the direct testing service. One of the tests conducted by the state laboratories is the Guthrie Test, a urine test for phenylketonuria (PKU). Since 1962 when this program was initiated, Ohio has found an incidence of one child with PKU in every 14,900 live births.

Bureau of Preventive Medicine

Within the Bureau of Preventive Medicine are the major program areas of the state health department. These areas include: chronic disease, maternal and child health, communicable disease, dental health, and the tuberculosis program.

Division of Chronic Disease. The main objectives of the Division of Chronic Disease are to promote and develop programs and services aimed toward the maintenance of health in the aged, early case finding, and the provision of restorative and rehabilitative services. Multi-phasic screening programs have led to increased demand for educational programs on diabetes, both for nurses and for the lay public. In cooperation with the Division of Nursing and the Ohio State University

Department of Physical Medicine and Rehabilitation, the Division of Chronic Disease has sponsored workshops on rehabilitation nursing. Professional nurses, working in community hospitals, nursing homes, extended care facilities, home health agencies, and other public health agencies, are invited to attend. In this workshop the nurses are made aware of the problems of immobility, including the nutritional problems.

Division of Communicable Diseases. Control of communicable diseases in Ohio is one of the responsibilities of the Communicable Disease Division. This entails the maintenance of surveillance on the kinds and numbers of cases of diseases and the identification of unusual situations so that information and aid can be sent to prevent the spread of those diseases. In Ohio as in other states the incidence of communicable disease has markedly decreased in recent years.

Division of Maternal and Child Health. The Division of Maternal and Child Health (MCH) is primarily responsible for the health of children and their families. Their program includes promotion of family planning; interconceptional health; family life and sex education; child growth and development; maternity hospital licensure, and hearing and vision conservation. The phenylketonuria program of this division follows up on PKU cases with the help of the Division of Nutrition providing literature, instruction, and support to the parents. Other programs within this division with nutritional components will be discussed in a later section.

Division of Dental Health. The objective of the Division of Dental Health is to assist in the prevention and control of dental diseases and to promote dental health through organized community efforts. Primarily the work is with the schools either with direct dental services or with educational programs.

Division of Tuberculosis. The Division of Tuberculosis develops, maintains, and evaluates a statewide tuberculosis control program in cooperation with local health departments, the health departments of other states, the United States Public Health Service, and various local agencies. In addition, the Division is responsible for the one state-operated tuberculosis hospital in Ohio which will be closed in 1972.

Bureau of Environmental Health

The objective of the Bureau of Environmental Health is to insure adequate sanitary facilities and services to safeguard the public health. Included in the program are such things as control of water supply, waste water treatment and disposal, trailer parks, swimming pools, solid waste disposal, the planning of subdivisions and other environmental factors to minimize disease, accidents, and health hazards. The Division of Environmental Health provides technical and administrative assistance in the planning, design, and operation and maintenance of all sanitary facilities. The Division of Occupational Health protects the public by detecting and controlling occupational diseases through regulation, education, and consultative services. By assisting local health departments to develop a level of sanitation required to meet

standards, the Division of Sanitation helps to prevent disease and promote health. The assistance is primarily in the form of advisory and consultative service.

Bureau of Local Services

Division of Nursing. The objective of the Division of Nursing is to aid in the development and promotion of quality nursing care for the citizens of Ohio. The staff is composed of a corps of nursing consultants who provide advice in matters relating to nursing and the development of community health services. Local health department nurses are responsible for school nursing in the parochial schools while the local school boards employ nurses for the public schools. Several cities or metropolitan areas such as Youngstown have recently expanded the staff of public health nurses in the health department to cover all the schools.

Division of Public Health Education. On request, the Division of Health Education gives assistance to local health departments, divisions in the department of health, voluntary health agencies, and other groups in local communities, in solving their health problems and improving their health education programs. Creative Services, a part of health education, sees its mission as helping local health departments to develop and present health education materials clearly, attractively, and in an interesting manner through the use of radio, television, slides, books, pamphlets, and art work.

Division of Local Services. The major objectives of the division are to coordinate and improve local and community service and to strengthen local health organizations. The coordination of health services for the seasonal migrant agricultural workers and their families is another function of the Division of Local Service. Nutritionists, clinic dietitians, and home economists are employed to serve the migrant workers during the peak summer season. These personnel are operatively responsible to the Nutrition Division even though their positions are funded by the Division of Local Services.

Division of Nutrition. The primary objectives of the Nutrition Division are to assist in identifying and assessing nutrition-related needs in the communities throughout the state and to promote, plan, or participate in activities which favorably influence the health status of Ohioans through improved nutrition practices. This division focuses on the stages in the life cycle during which nutrition has special significance such as the years of rapid growth and development, periods of acute or chronic illness, and the later years of life (17).

Program plans and objectives evolved as a response to a variety of influences. In the next part of the chapter some of these influences will be discussed as well as some of the current programs that implement the Nutrition Division's objectives.

III. THE NATURE OF NUTRITION SERVICES

History

The importance of nutrition was recognized early in Ohio, and the

Buckeye State was among the first to have nutritionists on its health department staff. As early as 1932, three of the 91 state health department employees were listed as nutritionists (19). As a part of the Bureau of Child Hygiene, later known as the Division of Maternal and Child Health, these three nutritionists were "to analyze the food habits of the people and to guide them in the wiser provision of better balanced, and more economic diets (20)."

By the 1940's the nutrition staff consisted of a chief nutritionist and one nutritionist in each of five districts of the state. Their program had expanded to include working with institutions, i.e. schools and hospitals. Activities related to school lunch were a particularly large part of the program. In 1949, a fulltime dietary consultant was added to assist hospitals with menu planning, food preparation, and equipment selection.

Tuberculosis was a pressing public health problem in the 1950's, and an additional nutritionist was employed to work specifically with tuberculosis hospitals. During the 1960's this program was discontinued due to the decrease in tubercular patients and the closing of many of the tuberculosis hospitals.

In the late 1960's the emphasis shifted again in nutrition. Previously, nutrition had been seen as solely service oriented. Now the philosophy is one of assessing the nutritional needs of the people of Ohio and making other people aware of these needs. This means more involvement in surveys and legislation. Part of this change is due to the reorganization of the Ohio Department of Health in 1964. Nutrition

was given the status of a division in 1967 and became a more visible component of the department. The chief of the Nutrition Division now attends executive staff meetings routinely, so position in an organization does help to determine the effectiveness of a program.

Programs

The most recent change in emphasis came with the national focus on malnutrition and the need for accurate surveys to evaluate nutritional status. Citizen's reports, television documentaries, and community groups have reported that hunger and malnutrition exist in Ohio. The Hunger, U.S.A. report identifies 10 counties in Ohio as "counties with severe hunger problems." The 1965 Food Consumption Study of the U.S.D.A. identified 14 Ohio counties as having 25 percent or more households with poor diets. Across the state 19.7 percent of all households were substandard. An estimated 1,000,000 people in Ohio were unable to purchase a marginal diet in 1969 based on the assumption that one-third of a monthly income of \$304 is necessary for a family of four to buy a marginal diet. Dietary intake studies of fourth grade students in a number of Ohio counties suggest that dietary intakes of protein, calcium, and vitamins A and C are inadequate for a large number of children surveyed. On the basis of these indications the Nutrition Division is working toward delineating the extent and specific nature of undernutrition and malnutrition in Ohio (21).

Another large area of concern is the quality of the food service in health care facilities in Ohio. One fulltime dietary consultant is

assigned to work with institutions, as well as the district nutritionists when they are requested to help. The institutional dietary consultant works to upgrade the training of food service employees through planning the curriculum for basic and advanced level courses in nutrition, menu planning, food handling, and preparation. Then she arranges for local dietitians to teach the classes. She provides consultative and in-service education services to the nursing home, Medicare, and hospital survey teams so that they can better identify nutritional and dietary problems as they conduct surveys for licensure (21).

In addition to the state funds that pay for the services of the Director of the Nutrition Division, one nutritionist, and a secretary, federal funds support the remaining four state nutrition positions through Maternal and Child Health Service grants. Because of the financial as well as program ties, the Division of Nutrition works a great deal with the Division of Maternal and Child Health. For example, together they conduct workshops for dietitians on PKU and prepare literature for doctors, nurses, and dietitians involved in the dietary management of children with PKU.

The school dietary surveys are another part of the state program for child health. These surveys are being conducted in cooperation with local health departments and boards of education, Model Cities, teachers, school nurses, and Cooperative Extension to obtain current information on eating patterns and nutrient intake. The surveys indicate that several important aspects of the diets need improvement, as previously indicated. Mothers of the students have participated in compiling the

survey data and this provided unique opportunities for parent/consumer education.

In-service education, orientation, and consultation are other large parts of the nutrition program. High priority is given by the nutrition consultants to assisting and/or participating with members of the nursing profession in nutrition education. Consultation with nurses of local health departments on request is an on-going activity. In-service staff development programs for nutritionists of state and local health agencies and demonstration projects are held twice a year. These programs promote the exchange of ideas and provide opportunities for continuing education in areas of interest to the nutritionists.

The Nutrition Division assists the Division of Local Services' Migrant Health Program to recruit nutrition personnel and to provide supervision for their program in the peak summer months. Therapeutic nutrition services have been expanded to provide for counseling of patients with nutrition-related health conditions. Diabetes, obesity, and anemia continue to be major problems among the migrant workers who come to Ohio.

In conjunction with the Division of Chronic Disease the Nutrition Division has been actively planning and conducting community classes for diabetics. These diabetics have been those who were newly diagnosed through the multiphasic screening program as well as other diabetics who wanted to get more information about their diabetes.

Over the years the Nutrition Division has expanded its program to meet the needs of the people of Ohio. It has not always been easy.

Occasionally others are not able to see the nutritional component of their program. An example to illustrate the problem involves Ohio's Food Advisory Board. As a governor-appointed board, it is concerned with sanitation in food service establishments. The group is made up of Ohio Department of Health sanitarians, two health commissioners (one from a rural county and the other from a city), representatives from the Bakers Association and the Restaurant Association, a representative from a local department store, and a pharmacist. (The latter two were included because department stores and drug stores often have lunch counters.) Hospitals, nursing homes, and schools were not included; yet together they constitute a large part of the food service establishments in Ohio. Within these establishments, it is the dietitian who is responsible for the sanitation. Even after a nutritionist attended the meeting and pointed out this important relationship, the chairman still did not recognize the need for dietitians on his board.

Public health nutrition in Ohio has come a long way but there are still areas where people are not aware of the nutrition component needed in their programs. That is the challenge for the future--to have nutrition personnel participate at the planning and policy-making level so that these other divisions and staff members become aware of the part nutrition plays in their programs and in their lives.

CHAPTER III

AN ANALYSIS OF THE FUNCTIONS OF A PUBLIC HEALTH NUTRITIONIST

Academic training is at best very abstract and theoretical until a student has the opportunity to see the practical application. The field experience was designed to enable the student nutritionist to observe and participate in applied nutrition in Ohio. Since the Ohio Department of Health is not the only agency providing nutrition services in Ohio, the student was able to interview and observe nutritionists from various agencies and in a variety of local health departments. This chapter is an attempt to demonstrate some of the observed applications of nutrition in terms of five functions of a public health nutritionist--planning, coordinating, consulting, teaching, and evaluating.

Although these functions require different approaches and techniques, frequently situations occur where a combination of functions is necessary. Often the consultant must teach the consultee before the consultee is ready for consultation. For example, the nutritionist must explain what is involved in establishing a home-delivered meals program before the local Community Action Committee Director knows what kind of services he needs from the nutritionist. Planning and evaluation are involved in most activities, as most programs and services should be planned to fulfill an objective and then reviewed in the light of that objective.

I. PLANNING

Planning is an essential function of a public health nutritionist. Programs should begin with a need and programs demand an organized procedure to meet the established need.

While in Ohio the student nutritionist attended a planning conference. The purpose of this conference was to arrange for a series of four classes for elementary school teachers on integrating nutrition learning activities into the curriculum.

The need for such a class was recognized long ago and discussed by Martin in 1954. At the White House Conference on Food, Nutrition, and Health in 1969 this type of program was recommended and served to revive popular interest. Similar classes in other Ohio counties had been successful, and the local Cooperative Extension agents wanted the program in their counties as well.

Another factor involved in this planning meeting was education. A large part of the time of a nutritionist is spent educating others. In order to plan effectively the group must be aware of the need for the program. Before the meeting the participants were sent copies of the 1969 White House Conference recommendations for nutrition teaching in elementary and high schools. At the beginning of the meeting the nutritionist briefly described the history of nutrition education and some of the current studies that point to the need for a concentrated nutrition education program in the schools. From the comments and questions of the group it seemed that they were convinced of the necessity

for this program in their particular schools and were anxious to begin.

In addition to the grass roots support for the program and the educational component, another interesting aspect of this conference that worked toward productive planning was the makeup of the group. The group represented both providers and consumers. It included a nutrition specialist from Cooperative Extension, a district nutritionist, and the student. School personnel were represented by two elementary school administrators, two curriculum coordinators, a school food service supervisor, and a school nurse. The consumers for whom the classes were designed were represented by several elementary school teachers. Martin pointed out that administrative understanding, acceptance, and active support are important to the success of the nutrition education program in the schools.

By his very attitude toward nutrition education the superintendent or principal can make a program administratively possible. He can encourage the use of teachers' time for nutrition activities, he can support the school lunch as a nutrition measure, and he can stand behind all other constructive activities which promote good nutrition. He can stimulate the cooperation of his staff by his own interest and by giving professional recognition to nutrition education as an essential part of health education. With such support, the movement usually gains momentum and is successful; without it, it frequently fails (22).

This planning conference also had a fourth element that increased the productivity of the planning--followup. Each participant was given an assignment. These assignments were particularly important as there was to be a 10-month interval between the original conference and the first class. It provided a transition and a means of sustaining interest in the project until the plan could be implemented.

The student nutritionist learned that productive planning is not a simple one-step operation. One cannot assume that others who are willing to plan an activity are as knowledgeable as a nutritionist about the many implications of the problem, so providing resource material and technical knowledge are often necessary parts of planning. Local recognition of the need is more productive in developing support for an activity than a decision at the state level that a program is needed in a certain area. Also the makeup of the group is important. For lasting results it is often necessary to have someone with authority to implement the decisions of the planning. Finally followup is important to maintain interest and to finalize plans. In some respects this conference really made the textbook come alive. In discussing nutrition education in the schools Martin stressed many of the points observed at this meeting, especially having a wide representation of school personnel including administrators. This meeting also demonstrated how different professional disciplines--administrators, teachers, nurses, and nutritionists--can work and plan together with each group sharing its expertise in working toward a goal.

II. COORDINATING

Coordinating is a second function of a public health nutritionist. Since one person or one agency cannot hope to provide all needed nutrition services, a nutritionist must be able to work with other groups, individuals, agencies, and organizations in a productive manner. Some of these other groups outside of the nutritionist's own agency might

include: professional organizations; home economics, physical education, biology, and elementary school teachers; local welfare departments; and the Cooperative Extension Service. Coordination means not only working on committees but also being aware of the nutrition related activities and programs within one's own agency and in the community so that comprehensive planning eliminates needless overlap and increases the efficiency of nutrition services.

One type of coordination is supporting the programs of other agencies that have an indirect nutritional component. One such program is a coalition of church, welfare, and civic organizations, working to alleviate hunger in Franklin County (Columbus). One of the members of this committee is the nutritionist with the Children and Youth Project at Children's Hospital in Columbus. The committee decided that one way to alleviate hunger was to work for the passage of Governor John J. Gilligan's Welfare Reform Bill. A section of the Bill provides for a 20 percent increase in payments to mothers with dependent children. With more money to purchase food, a better diet is a more realistic goal.

Nutrition is not an isolated entity. It does not exist only in health department programs. Nutrition relates to many programs and these programs need interagency support. For this reason nutritionists must be supportive of other programs which help to alleviate the nutrition problems of their community.

III. CONSULTING

Consultation is an important tool of the public health nutritionist and one that is frequently used. By definition consultation occurs between two professionals, and the consultant has no direct authority to implement the recommendations. Due to the lack of authority many hospital-trained dietitians find that consulting in a nursing home requires an adjustment. Help in making this adjustment often can be given by the Public Health Nutritionist who acts as a consultant to the nursing home dietary consultants. For this reason it is important that the student nutritionist have opportunities to function in this area during her training.

Nursing homes are not the only places where a nutritionist might need to be a consultant, but it is a fairly common area and one of special interest to the student. On several occasions during the field experience the student visited nursing homes in Ohio with various health professionals. The student also attended a lecture by a nutrition consultant with the Nursing Homes and Related Facilities program of the U.S. Public Health Service, on "The Role of the Dietary Consultant."

In her discussion she pointed out two major areas of the dietary consultant's responsibility--management and nursing care. Management responsibility included: (1) evaluating the overall service and identifying the priorities, i.e. recipe file, job descriptions, work schedules, sufficient employees; (2) helping the cook supervisor evaluate the performance of other employees for whom he is responsible; (3) planning

and conducting in-service education for the dietary staff on topics of interest to them; (4) encouraging all employees, especially the manager, to continue their education in special classes for food service workers; (5) advising the administrator through written reports. The nursing care responsibilities include: (1) being the dietary department's liaison with doctors and nurses, questioning diet orders, checking with nurses on their observations of patients, reading charts; (2) having diet manuals available at the nurses' stations as well as in the kitchen; (3) visiting patients and counseling on diets as needed; and (4) approving all menus, regular and therapeutic. Some of these duties involve planning, teaching, coordinating, and evaluating functions. Even though the dietitian is called a "consultant," her duties may involve more than consultation. Regardless of which functions she employs, the dietary consultant still may not have authority to enforce her recommendations.

On one visit to a nursing home the student accompanied a public health nurse assigned to the Medicare program. This particular nursing home had been surveyed by the Medicare survey team several months previously and several deficiencies had been reported. The visit was a followup one to see how the deficiencies were being corrected. Since this home had dietary problems the nurse requested assistance from the Nutrition Division.

Before the visit both the nurse and the district nutritionist in that area explained the situation in the home to the student. The dietitian, an older woman, was very active in the Ohio Dietetic Association, the local group for consulting dietitians, and other such groups. She

had been working in this home for five or six years as their consultant dietitian. However, during the Medicare survey the nurse observed that the menus and modified diets were not written according to the Ohio Diet Manual and questioned their accuracy. After the Nutrition Division reviewed the menus the district nutritionist spoke to the dietitian several times about the menus and the written menus did improve. However, the dietitian was very sensitive about this problem and expressed a feeling of being persecuted by the health department.

When the nurse and the student arrived the dietitian was present and expecting them. While the nurse spoke to the administrator, the dietitian took the student on a tour of the kitchen and explained her work and responsibilities. During the entire visit the student asked questions and observed but offered no further comments. The dietitian spoke freely and did not appear threatened by the student.

The student nutritionist observed several inconsistencies in the dietitian's description of the food service. For example, the menus were not posted in the serving area, which was some distance from the preparation area. The dietitian said her staff knew the menu well enough so that this was unnecessary. However, the student noticed every patient was being served chocolate cake even though there were six diabetic patients who should not have had it according to the menu. Also the variety of calorie levels ordered by the physicians for diabetic diets was much greater than the diets that were written, and the same was true of the sodium-restricted diets.

The relationship of this visit and the talk was very beneficial

to the student nutritionist. They came very close together in time and provided the student with an opportunity to apply the lecture material. Previously the student had been insecure in her ability to function as a consultant in a nursing home situation. Now she was more aware of the functions of a consultant and was more confident in her ability to assess and suggest solutions to problems.

Perhaps during the visit the student could have said more about what she had observed, but the situation was delicate and she did not want to embarrass anyone. Furthermore, it was the nurse who asked for the consultation and the nurse and the student discussed the dietary department after leaving the home. The observed inconsistencies were discussed, the nurse agreed with the student, and she was willing to check on those problems on the next visit.

From this experience the student learned that consulting is not always easy. Many things must be kept in mind during the visit besides the nutritional aspects. This was a good learning experience in public relations and in working with people. This experience pointed out the necessity of observing closely what is going on. Granted, a dietary consultant can not expect always to know what is going on when she is not in the nursing home, and she has no direct authority to force changes; but if glaring violations of dietary standards occur on days when she is there, she should at least observe it and try to correct it. The student was frustrated in finding a solution for this problem.

Also out of this experience the student learned more about the Medicare program. For instance, regardless of how many deficiencies

the dietary department has in a nursing home, these problems are not sufficient to suspend their certification, much less revoke it. However, as the nurse said, a home with gross problems in the kitchen is likely to have other problems covered in the Statutory Requirements for Participation.

IV. TEACHING

Teaching is another large area in which a nutritionist must function. As a professional with expertise in nutrition, she is called upon to teach both other professionals and the layman. By definition teaching is presenting a body of knowledge in an attempt to modify behaviour. Successful behavior modification depends not only on the material presented but also on the manner in which it is presented. While academic training provides the basis for the material, what is it that enables some teachers to move their audience?

Throughout the field experience the student attended many lectures and classes. The two examples cited here provide contrasts which illustrate some considerations in teaching.

The first teaching situation was the first class in a series of 10 classes for food service workers on nutrition, menu planning, food handling, and preparation. This class of 40 was the dietitian's first experience teaching large groups. The topic for this particular class was nutrients, what they do in the body and their food sources. The material was presented as a lecture and elicited very little audience participation. The dietitian "covered" the material

in a manner geared appropriately to her audience. Yet the class showed little interest and asked only a few questions most of which were not related to the topic.

The other situation was also a lecture but the group was professional, the Ohio Dietetic Association. Unlike the other class this group knew a great deal about food, the topic the dietitian was discussing. To professional dietitians the topic did not sound very promising but this was not the case. This was the first time the student nutritionist had ever attended a lecture when the group decided not to take a break during the three-hour presentation and would have been willing to sit longer. Both dietitians had similar background knowledge and training, but the second dietitian had more teaching experience which helped.

She knew how to choose visual aids--slides that could be seen in the large room rather than posters which could not. Her style was relaxed and smooth indicating self-confidence. As she spoke she asked questions and related the material to her audience's own situation, so that by the end of the lecture her audience knew how they intended to implement some of what she had said.

In trying to isolate the differences in these two lectures several things need to be considered. First, obviously the groups were different; hence the approach needed to fit the level of the group and should have been different. Both dietitians did a good job in relating to the level of their groups, so this did not play a large part in the difference in effectiveness. A second similarity was in education.

Both had similar academic and internship training, so obviously just knowing the material is not enough.

These two dietitians were similar in several respects, but there are three areas where they were different that need to be discussed. Granted there are many other facets that could be discussed, but these are the important ones for this brief discussion.

Experience had an effect. The dietitian with more experience was more at ease in front of her group. From this the student observed that although practice may not always make perfect it definitely helps. As the first dietitian becomes more familiar with her group, her experience and confidence will improve and so will her teaching.

An obvious difference in these two lectures was the enthusiasm that the instructor demonstrated toward the topic. Perhaps the first dietitian's enthusiasm was masked by her nervousness. The second dietitian, however, displayed an enthusiasm for "beautiful food" that was infectious. One of the things she said was "food is the second most sensuous thing in the world. It must be made appealing to sight, sound, touch, taste, and smell--all of the senses." Through her talk she demonstrated her creativity and imagination. It was obvious that she enjoyed her work and found it challenging and interesting.

The major area of difference seemed to be in the amount of student involvement. In the food service class the participation was minimal. The class was never offered an opportunity to apply the information. This could be corrected by giving the class something to do. For example, if the class had begun with a recall of the food which the students had

eaten within the previous 24 hours, they could have evaluated it as each nutrient was discussed and then at the end evaluated it against the Basic Four Food Groups. This would have shown how much easier it is to use groups for evaluation rather than to evaluate each nutrient separately. The teacher might ask for a similar recall at the last class in the series to see if there had been any changes in the students' behavior. Also during the lecture this dietitian might do what the other one did and frequently tie her remarks to the home or kitchen setting, thus making the information more personal for the audience.

The major factors involved in these two situations were experience, enthusiasm, and involving the audience in the material. Experience increases the poise and confidence of the speaker. Often the enthusiasm is infectious and can go a long way to create interest in the group. Getting the class to see how the topic relates to them personally is a large part of convincing them to modify their own practices and then the practices in their institutions.

This emphasis on changing behavior implies focusing on the student rather than on the teacher. It is important that the material be geared to the level of the class and be presented in an understandable manner. But more importantly the emphasis needs to be on the student which means focusing on the changes the student should make in his behavior after the lecture. This emphasis applies to teaching professionals and laymen either individually or in groups (23).

V. EVALUATING

Evaluation takes many forms depending on what is being reviewed.

Public health nutritionists are called upon to evaluate programs, patients, and themselves. This is one function that is intimately related to planning. Planning establishes the objective or norm against which something is evaluated.

Like many public health programs nutrition is preventive and as such is very difficult to evaluate on the basis of how many people are seen. Numbers on a statistical report give information about where the nutritionist is placing her emphasis, but do not indicate how effective her program is. The only other way to evaluate these programs is to compare the results of a program with previously established objectives. For example, in the school dietary surveys perhaps 4,000 children participated, but that number is not as illustrative of the success of the program as the number of nutrition related programs started from these school contacts (21). The objective was to increase nutrition education in the schools as well as accumulate dietary data on the children. Increasing nutrition education requires an active response from the participant. Evaluation by objective is more difficult and time consuming than evaluation by numbers served, but the former is a more accurate measure of behavioral change and thus an indicator of success.

The following is an example of diagnosis and evaluation of a patient. It points out that nutritionists are involved in this type of activity but more importantly it focuses on the manner of evaluation-- the interdisciplinary approach.

In the student nutritionist's previous experience in hospitals and in public health she had attended many staff meetings. Most of these

were reporting sessions. Each staff member reported his activities or recommendations to the physician or health officer, and discussion followed led by the physician. One staff meeting that the student attended in Ohio was different. It was the conference following a staff evaluation of a child at the Mental Retardation Training Program clinic. As usual each discipline reported on its phase of the child's developmental tests. The unusual feature was that the team leader was the nutritionist not the physician. A physician was present and reported on the results of the physical examination. The team leader summarized the findings, and a consensus on treatment and referral was reached. In this agency members of the various disciplines rotate as the team leader who is responsible for the evaluation conference. The atmosphere was equalitarian. The total responsibility for the patient care was more evenly divided, relieving the physician of total responsibility. This experience proved to be the best and most exciting example of the textbook interdisciplinary team approach that the student had seen. Not every group nor every physician is ready for this type of sharing but it did give the student a good picture of the possible role of a nutritionist in this type of situation.

The third area of evaluation in which nutritionists participate is self-evaluation. This is by far the hardest to do well. It is difficult to remain objective about one's own performance. To do this type of evaluation the nutritionist needs to look at the situation in an analytical fashion and separate several factors. What are the external and internal factors that contribute to the success or failure of the situation? How many of them were beyond the control of the

person being evaluated? What strengths and/or weaknesses of the person were brought out in this situation? Nothing is achieved by concentrating on a failure unless the person learns how to avoid the unsuccessful factors another time. This is the way for a person to grow and develop professionally. These same questions can also be helpful in evaluating other nutritionists and other people.

CHAPTER IV

SUMMARY AND EVALUATION

Nutrition is a part of life from birth to death and as such has a great effect on health. Recently nutrition has received a great deal of national attention with the exposure of malnutrition in America. The surveys of fourth graders in several middle class communities in Ohio served to point out that this malnutrition is not just a problem of the poor. Families with sufficient money are not giving their children a proper diet either. This eight-week field experience gave the student nutritionist an opportunity to observe how Ohio is moving to meet these and other nutritional needs.

While in Ohio the student observed some of the factors which determine nutrition programs there. For example, some programs grow out of a statistically demonstrable need, such as nutrition classes for diabetic patients when diabetes is the sixth leading cause of death in Ohio. Other nutrition activities are tied to programs in other divisions of the Ohio Department of Health. Supporting the institutional survey teams with classes for food service workers or with nutritional consultation to the members of the survey teams are examples of this type of program motivation. Additional activities give information about the nutritional status of Ohioans and perhaps provide the statistical basis to justify needed programs. Political pressure can also affect programs, at times to support programs like the nutritional status

surveys, and at other times to hinder or prevent services. Also the position and status in the organization affects the relationships, effectiveness, and visibility of nutrition. Finally, the personality and interests of each individual nutritionist affect the programs which receive her emphasis. The student observed that health and nutrition programs are influenced by a great number of environmental factors.

During the experience the student nutritionist worked with nutritionists and other health professionals, applying the academic principles to public health problems in the community. The student also observed nutritionists planning, coordinating, implementing, and evaluating programs jointly with other divisions of the Ohio Department of Health and with other agencies in an effort to provide comprehensive health service in Ohio.

The field experience provided the student nutritionist with a variety of opportunities to observe nutritionists and to see how each developed her program given the particular set of circumstances in her area. By seeing the variety of possible solutions, the breadth of the student's experience was expanded and the potentialities of the profession were illuminated. Situations brought much of the academic material to life. The student nutritionist was grateful for the opportunity to share in the nutrition program in Ohio.

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VITA

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