



8-1969

Nutrition Field Observations and Experiences in the State of Maryland

Kay Hudson Beavo
University of Tennessee, Knoxville

Follow this and additional works at: https://trace.tennessee.edu/utk_gradthes



Part of the [Nutrition Commons](#)

Recommended Citation

Beavo, Kay Hudson, "Nutrition Field Observations and Experiences in the State of Maryland. " Master's Thesis, University of Tennessee, 1969.
https://trace.tennessee.edu/utk_gradthes/3936

This Thesis is brought to you for free and open access by the Graduate School at TRACE: Tennessee Research and Creative Exchange. It has been accepted for inclusion in Masters Theses by an authorized administrator of TRACE: Tennessee Research and Creative Exchange. For more information, please contact trace@utk.edu.

To the Graduate Council:

I am submitting herewith a thesis written by Kay Hudson Beavo entitled "Nutrition Field Observations and Experiences in the State of Maryland." 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:

Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

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

August 1, 1969

To the Graduate Council:

I am submitting herewith a thesis written by Kay Hudson Beavo entitled "Nutrition Field Observations and Experiences in the State of Maryland." 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:

Frances A. Schofield
Cyrus Wayshank

Accepted for the Council:

Vice Chancellor for
Graduate Studies and Research

NUTRITION FIELD OBSERVATIONS AND EXPERIENCES
IN THE STATE OF MARYLAND

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
Kay Hudson Beavo
August 1969

ACKNOWLEDGEMENTS

It is a pleasure to express appreciation to Miss Carol Loomis, Nutrition Consultant, Nutrition Division, Maryland State Department of Health, for her time and effort in planning the overall field experience. For experiences provided in local health departments, the student is grateful to Mrs. Nancy Rhyne, Nutrition Consultant, Baltimore City Health Department and Mrs. Eleanor McCarl, Director of Nutrition, Baltimore County Health Department.

The student recognizes her major professor, Miss Mary Nelle Traylor, Department of Nutrition, University of Tennessee, for guidance provided during the writing of this thesis. Appreciation is also extended to Dr. Frances Schofield, Department of Nutrition and Dr. Cyrus Mayshark, College of Education, for their assistance. The student wishes to thank Joe Beavo, Jr., for his patience and encouragement during the writing of this thesis.

K.H.B.

ABSTRACT

This thesis is a resume of the author's field experience in public health agencies in Maryland. The field placement was planned to supplement previous work experience and graduate study toward a Master of Science Degree in Public Health Nutrition. The field placement was arranged to provide an opportunity for the student to gain an understanding of the interrelationships of nutrition programs and services at different governmental levels.

Two weeks were spent in the Maryland State Department of Health and in the Baltimore County Health Department, and four weeks were spent in the Baltimore City Health Department which is responsible for administering federally-funded Maternity and Infant Care and Children and Youth Projects. Orientation was provided to state health programs with a nutrition component through conferences and specific literature provided for reading. The orientation in the Baltimore County and Baltimore City Health Departments included observation and participation in various programs and services as well as personal interviews and selected readings.

During the field placement the student learned about the health problems in Maryland and how the public health programs have developed to alleviate or minimize the problems. An overall view of the state public health organization was gained with a more thorough understanding of those bureaus and divisions into which nutrition services are integrated.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION	1
II. FACTORS WHICH DETERMINE THE HEALTH PROGRAMS	
IN MARYLAND	3
Vital and Health Statistics	3
Economic, Social, and Political Characteristics	6
III. MARYLAND HEALTH DEPARTMENTS	10
Historical Development	10
Organization	10
State	10
Local Health Departments	13
Baltimore City	14
IV. MARYLAND NUTRITION PROGRAMS	18
History	18
Staff	19
Orientation	21
Communication and Continuing Education	21
Special Projects	23
State Nutrition Services	23
Maternal and Child Health	23
Day Care	25
Mental Retardation	26

CHAPTER	PAGE
IV. (CONTINUED)	
Day Care	26
Phenylketonuria Program	27
School Health	29
Crippled Children's Program	29
Nursing	30
Chronic Disease	31
Respiratory Disease	32
Special Health Services	33
Baltimore City Nutrition Services	34
Maternity and Infant Care	35
Children and Youth	36
Task Force on Nutrition	38
Voluntary Nutrition Services	40
Meals-on-Wheels	40
V. ANALYSIS OF STUDENT'S PROFESSIONAL DEVELOPMENT	43
Consultation With Other Professional Workers	43
In-service Education	44
Group Work With Nonprofessional Groups	44
Conferences for Planning	49
Counseling Nonprofessional Persons	52
Analysis of Participation in a Specific Activity	53
VI. SUMMARY	56

CHAPTER	PAGE
BIBLIOGRAPHY	58
VITA	62



CHAPTER I

INTRODUCTION

The field of public health has changed as reasons for change evolve. In the past public health workers have been primarily concerned with the control and eradication of communicable diseases and the abolishment of undesirable environmental factors. More recently public health programs have also become involved with the administration of medical care programs for the indigent and medically indigent. The development of these programs has illustrated a growing awareness of problems such as increasing population, mental retardation, and chronic illness (1). A natural change in personnel providing the services has accompanied the diversification in basic public health programs. The physician-health officer, public health nurse, and sanitarian have been the key personnel in the past; however, in recent years health educators, psychologists, psychiatrists, social workers, physical therapists, occupational therapists, statisticians, dentists, and nutritionists have also been employed. Filling these additional positions has created the necessity of establishing new programs to train paramedical personnel. The program in public health nutrition, for which this thesis has been written, is an example of such training. This thesis is largely a resume of the author's field experience in Maryland's public health agencies.

One objective of the field placement was to learn how various health programs originated to meet the health needs of the population.

Another was to gain an understanding of the public health nutrition programs in Maryland and how they relate to other health programs. In addition the field experiences permitted the student to observe the differences and interrelationships in the nutrition programs and services in a state, county, and large metropolitan city since the training included two weeks in the Maryland State Department of Health, two weeks in the Baltimore County Health Department, and four weeks in the Baltimore City Health Department. A longer time was spent in the Baltimore City Health Department which allowed an orientation to the comprehensive health projects. This experience seemed desirable in view of current trends and limited knowledge in this area. A fourth objective was to supplement previous education and experience prior to the field work. In this respect the student requested opportunities to observe nutrition services in programs with which she was unfamiliar, such as a Meals-on-Wheels Program and a program for treatment of phenylketonuria.

The field experience is summarized in the subsequent chapters. During a field experience of only eight weeks a student can be involved with only a small part of a complex state public health program. Consequently, most activities were directed toward programs and services having a nutrition component.

CHAPTER II

FACTORS WHICH DETERMINE THE HEALTH PROGRAMS IN MARYLAND

This chapter deals with many of the vital and health statistics and with some of the socio-economic factors which have influenced the development of public health programs in the state of Maryland. Collection of vital and health statistics is essential for a health agency to assess the effectiveness of previous and current health programs and to assist in planning for future ones. Trends in population growth and distribution of particular age groups within the population influence where health services should be concentrated. The economy of the state influences health programs in two ways. First, available tax resources affect the total health budget which determines, in part, the expansion of programs; second, the economy influences the kinds of health services needed by the population.

A. Vital and Health Statistics

The population of Maryland has been increasing at a rapid pace. While it ranks as the forty-second state in land area (2), in 1966 it was the twentieth state in population (3). At the last census date, April 1960, the total population was 3,100,420. The estimated population on July 1, 1967, was 3,692,420 (2). This increase is equivalent to a 2.7 percent average annual gain compared to a national average annual gain of 1.6 percent (4). The more rapid growth in Maryland can be

attributed to two factors: natural increase (the excess of births over deaths) and gain from net migration (2).

The two main metropolitan areas of Maryland, Baltimore and suburban Washington, contain over 80 percent of the total population. From 1950 to 1960 the suburbs of Washington in Maryland had a 6.8 percent average annual increase as compared to a 1.4 percent average annual increase in Baltimore and a 1.5 percent increase in the non-metropolitan areas (2). Part of the general rise in Maryland's population, that is about 1.6 percent, the same as the national average, can be attributed to natural increase; however, the disproportionate increase in the Washington area was due largely to the net migration to this metropolitan area. This migration contributed over 40 percent of the total increase in Maryland from 1950 to 1960. The projected figures for 1960 to 1970 show a similar trend (5).

The influx of people has been weighted heavily with the 20 to 40 year old age group. In addition, the large indigenous group of "war babies" were reaching childbearing age. Therefore, from 1950 to 1960 the age group with the greatest percentage increase in population was that between 5 and 15 years old. Since 1957, the crude birth rate in Maryland has steadily declined from 26.3 births per 1,000 population in 1957 to 18.9 in 1967. Consequently, in the period from 1960 to 1967 the largest segment of the population was from 15 to 25 years of age. In contrast, only 7.3 percent of the population was over 65 years of age in 1967 (2).

The general increase in population and particularly the recent increase in the segment of childbearing age has direct effects on public health programs, especially those concerned with family planning and with maternity and infant care. Although only a relatively small segment is over 65 years of age, this group consistently has greater health needs than the younger population.

In 1967, 53 percent of all births in Maryland were to mothers under 25 years of age and 18 percent to mothers under 19 years of age. For the same period, 13.3 percent of all births were illegitimate. The city of Baltimore, which includes a large segment of the total Maryland population, greatly influenced this percentage since 28.4 percent of all births there were illegitimate. Of the nonwhite births in Baltimore, many of which occurred in the inner city, 44.6 percent were illegitimate. In 1967, 9.2 percent of the total births in Maryland and 13.1 percent of the births in Baltimore were premature. The national figure for 1965 and 1966 was 8.3 percent (2). Teenage mothers or mothers giving birth to illegitimate children are considered to be in a high-risk category. That is, the chance that the infant will be premature (weigh less than 2500 grams), or that infant or maternal death will occur is greater than normal. These statistics emphasize the need for the public health programs in family planning and prenatal care.

The 1967 crude death rate of 8.4 per 1,000 population was the lowest ever recorded in Maryland; the national death rate for the same period was 9.4 per 1,000. Ranked in decreasing order, the ten leading

causes of death in Maryland in 1967 were: diseases of the heart, malignant neoplasms, cerebral hemorrhage and other vascular lesions, all accidents, certain diseases of early infancy, influenza and pneumonia, diabetes mellitus, other diseases of the circulatory system, cirrhosis of the liver, and bronchopulmonic diseases (2). In recent years, more than 50 percent of deaths in Maryland have been due to diseases of the heart and blood vessels (6). The ten leading causes of death demonstrate that chronic diseases have taken the place of communicable diseases as the major causes of death. This fact justifies the establishment of chronic disease hospitals and rehabilitation programs for the chronically ill and warrants the expansion of programs for early detection of chronic diseases.

B. Economic, Social, and Political Characteristics

The variation in the topography of Maryland greatly influences the economy of the different sections. The Eastern Shore has fertile soil, adequate water, and temperate climate making it a good area for raising vegetables and fruits. Migratory workers come annually to the truck gardens of this section to harvest the produce. Between the Eastern Shore and Southern Maryland lies the Chesapeake Bay with many rivers and tributaries emptying into it. This vast water area supports large populations of fish, shellfish, and other seafood which form the basis for many food processing and packing industries. In addition, the Eastern Shore is bordered in part by the Atlantic Ocean which attracts tourists. The

western section of Maryland is mostly rural having an economy centered primarily around agriculture. Fruit and grain production along with dairy farming are predominant. Another distinct section is the Baltimore-Washington metropolitan area. The economy of the area surrounding Washington, D.C. is supported largely by the many federal jobs available. The Baltimore area, on the other hand, is supported primarily by industry. A 1963 census of manufacturers reported 3,519 manufacturing establishments in Maryland with 51.7 percent of the plants in the Baltimore area. Located near the city of Baltimore is the Bethlehem Steel Mill, largest in the free world, which employs more than 32,000 people (7).

As the bases of the economy of the different sections vary, so do the public health problems. On the Eastern Shore, special problems involving care for the migrant workers and their families have developed (8). In the Chesapeake Bay area, the many seafood processing plants require inspection by health department personnel. Densely populated areas, such as the inner city of Baltimore where the population is primarily nonwhite and poor, create enormous health problems demanding comprehensive programs which offer direct medical services. Legislation has made the Maryland State Department of Health responsible for enforcing pollution control laws (9). The large number of heavy industries in the Baltimore metropolitan area increases the need for air pollution control enforcement (10). Similarly, the food processing plants on the Eastern Shore, which must dispose of caustic organic by-products, increase the problems of controlling water pollution. Water pollution has two

immediate and adverse effects on Maryland's economy: making shellfish unsafe for human consumption and causing water recreation to be both unsafe and undesirable (9).

The state median income in 1960 was \$6,309 as compared to \$5,700 for the nation (11). The median incomes of the various sections of Maryland are indicative of where the more affluent segments of the population reside. In 1960 Montgomery County, in the Washington, D.C. area, had the highest median income, \$9,317, due primarily to the large number of well-salaried government employees living there. Prince Georges, Anne Arundel, Howard, and Baltimore Counties, also included in the metropolitan area, had median incomes considerably higher than the state average. The median income of Baltimore was \$5,659. The Eastern Shore and the western section of Maryland had relatively low median incomes ranging from \$3,379 to \$5,262 (7).

Maryland is divided into 24 political subdivisions, 23 counties and the city of Baltimore. Baltimore has a government administered by a city mayor and city council. Each county is governed by elected commissioners. The health department in each county and in the city are autonomous, each responsible to the local elected officials. In most instances the Board of County Commissioners serves as the local board of health. All of the local health departments are responsible for administering and enforcing the pertinent laws of the state and the Annotated Code of Maryland (8).

During the field experience in Baltimore County, the county budgets were presented to the Commissioners. The student had the opportunity to attend the hearings in which the Baltimore County Health Director presented the proposed 1970 health department budget.

CHAPTER III

MARYLAND HEALTH DEPARTMENTS

A. Historical Development

Maryland has two complex departments of health, the Baltimore City Health Department and the Maryland State Department of Health. The Baltimore health department was established in 1793 as the first city health department in the United States (12). Not until 1874 did the Maryland General Assembly pass an act establishing the State Board of Health (13). During this 81-year interval, the city health department expanded greatly, adding to both areas of service and to personnel (12). Consequently, the city health department has continued to function as a distinctly separate agency even though it is technically one of the local health units of the state health department (13). This separation of the city from the state health department, probably due originally to the unique development of the city department, has hindered in the utilization of state consultative services by city personnel.

B. Organization

State

In 1961 the State Board of Health was renamed the State Board of Health and Mental Hygiene and assigned supervisory and policy making functions for both departments (13). The board, which consisted of

twelve members, held meetings only once a month which often resulted in delay of the development of policies for health programs. Consequently, the governor of Maryland terminated the state board and appointed a physician as the Secretary of Health and Mental Hygiene. The secretary assumed the responsibilities and authority of the state board July 1, 1969. During the orientation to the state health department, an opportunity was provided for the student to attend part of a State Board of Health and Mental Hygiene meeting where nursing home and air pollution control regulations were being discussed.

The organizational chart of the state health department, effective July 1, 1967, is shown in Figure 1. To bring it up to date, the secretary should be substituted for the state board. Under the Secretary of Health and Mental Hygiene is the Commissioner of Health who has a Deputy Commissioner for Programs. Responsible to the deputy commissioner are four assistant commissioners. They are the Assistant Commissioners for Community Health Services, Environmental Health Services, Administration, and Medical Care Services. The state health department offers consultative services to the local units. In addition, state personnel are responsible for overall planning and policy making, standard setting, data collecting, administrative management, and centralized laboratory services.

Local health departments, placed under the Assistant Commissioner for Community Health Services, include the 23 county and the Baltimore health departments. The local units provide most of the direct health services to the public.

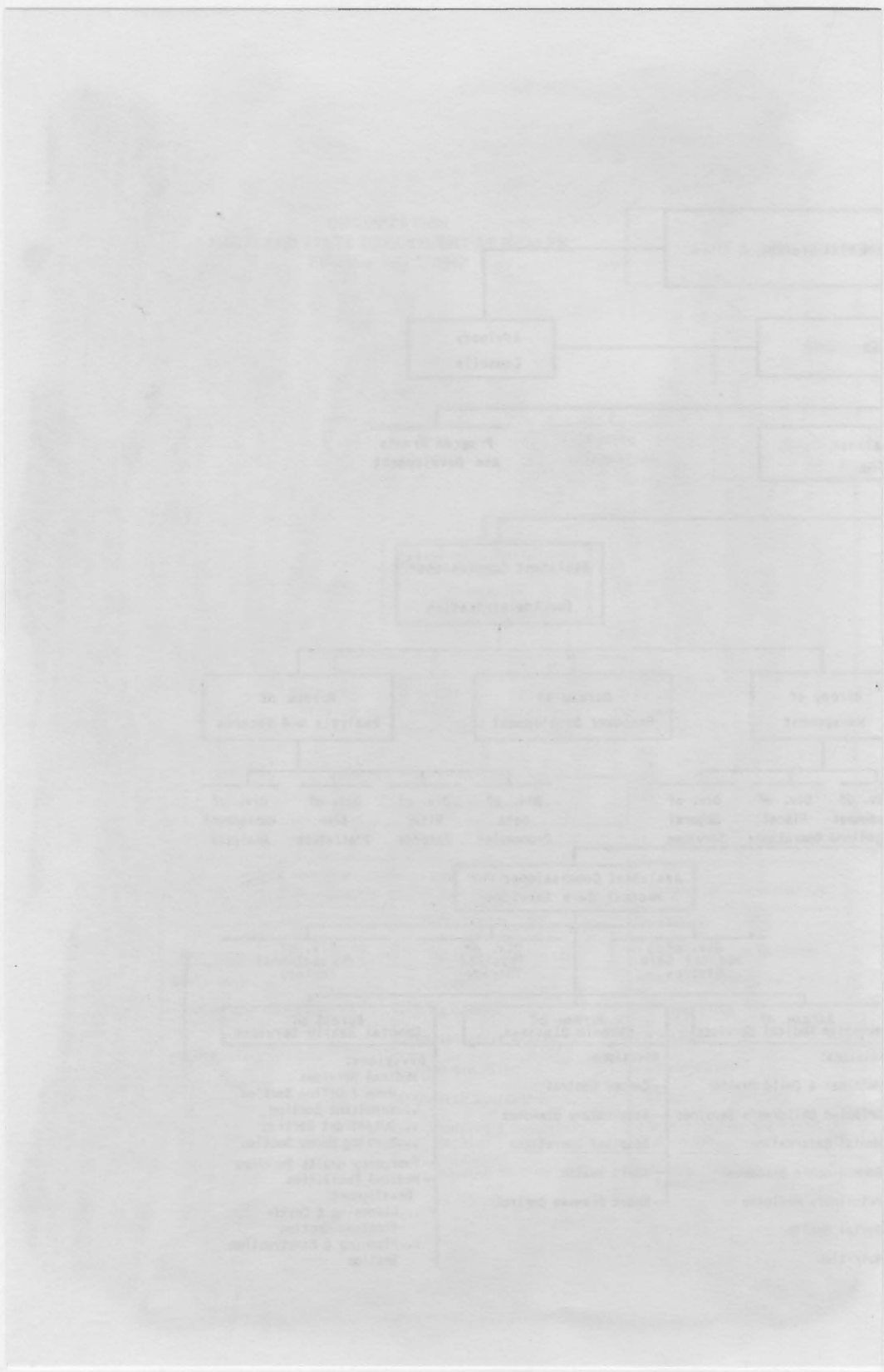
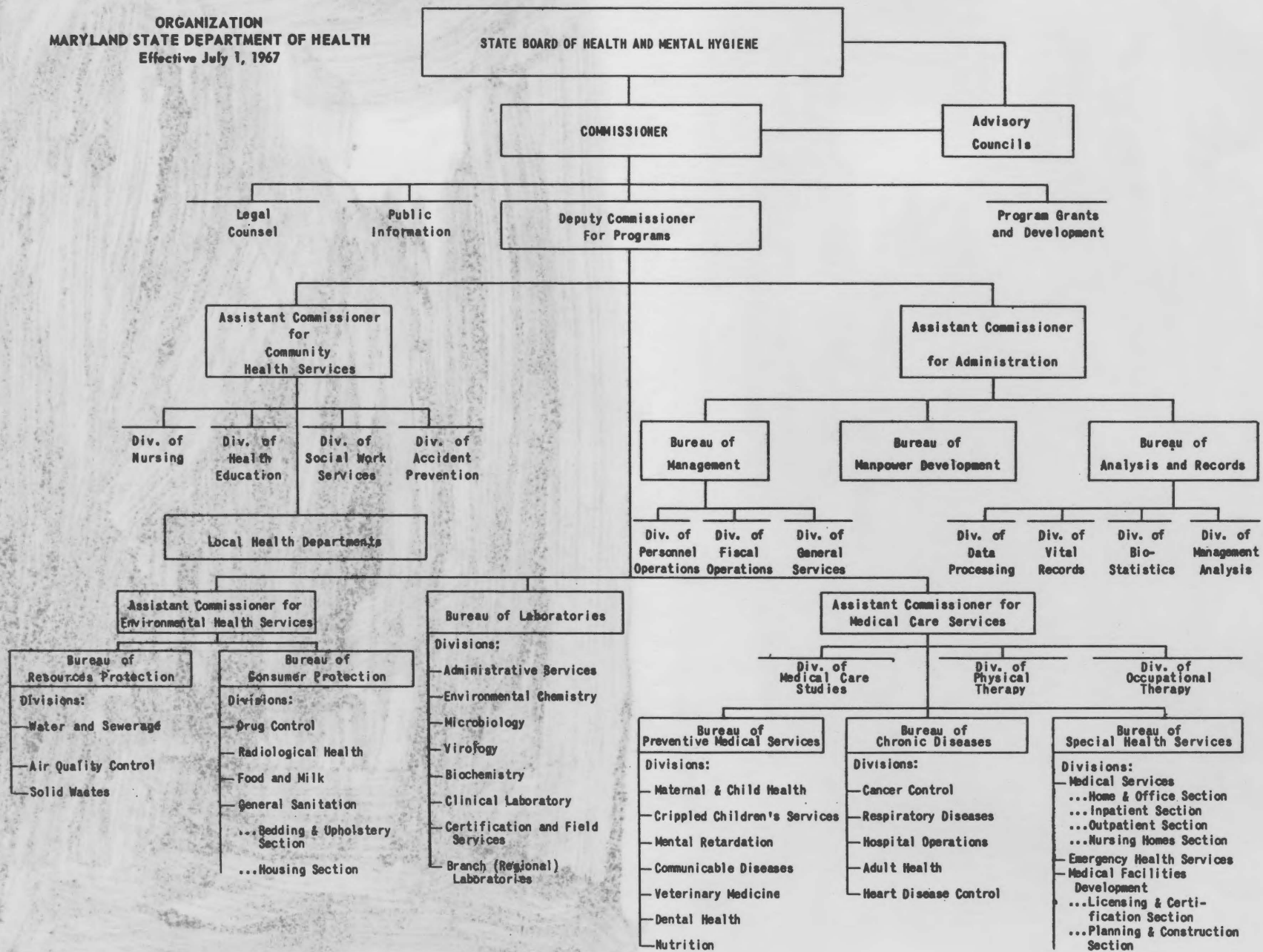


Figure 1. Organizational chart--Maryland State Department of Health.

ORGANIZATION
MARYLAND STATE DEPARTMENT OF HEALTH
 Effective July 1, 1967



The Assistant Commissioner for Environmental Health Services is responsible for recommending laws, regulations, and standards regarding the control of air and water pollution (14). Environmental pollution, one of the main public health problems in the waterfront and industrial areas of Maryland, is the major concern for the Bureau of Resources Protection. The Bureau of Consumer Protection carries out activities related to food and food service establishments of interest to the Nutrition Division.

The Bureau of Manpower Development was created in 1966 and placed under the Assistant Commissioner for Administration. This bureau was created to help meet the need for additional, well-qualified personnel to provide newer and more diversified health services (13).

Under the Assistant Commissioner for Medical Care Services are three bureaus, the Bureau of Preventive Medical Services, Chronic Diseases, and Special Health Services. Some of the program areas under these three bureaus will be described in more detail in Chapter IV since the Nutrition Division is part of the Bureau of Special Health Services and nutrition services are an important component of programs in all three bureaus.

Local Health Departments

In 1877 a legislative act gave the State Board of Health the authority to compel the county commissioners to organize local boards of health. By 1896, 20 of the 23 counties had organized boards of health, and by 1934, all 23 counties had instituted full-time health departments (13). The size and programs of the 23 local health departments vary

widely. Counties with a larger population need a larger staff to provide necessary health services. State funds help to make the same basic services available to all Maryland citizens. Federal funds may come into a county through special grants or may be given to the state to be distributed locally for special services, but they are not used in determining the annual budget for routine health department operation.

Baltimore County, one of the counties in the metropolitan area, has a large health department. The organizational chart, shown in Figure 2, was last revised in January, 1969. The Director of the department is responsible to the County Board of Health and placed under the Director is the Deputy Director who is directly responsible for the six bureaus. The Division of Nutrition is placed under the Bureau of Health Supervision. Geographically, Baltimore County forms a horseshoe around Baltimore City. Since it is so widely spread, there are fifteen health districts where direct health services are provided.

Baltimore City

The organization of the Baltimore City Health Department is shown in Figure 3. The head of the department is the Commissioner of Health who is responsible to the Mayor and City Council of Baltimore. Directly under the Commissioner is the Deputy Commissioner to whom the directors of the four major health services are responsible. A fifth group of services, which has no director, is placed directly under the Deputy Commissioner. The Nutrition Service is in this group.

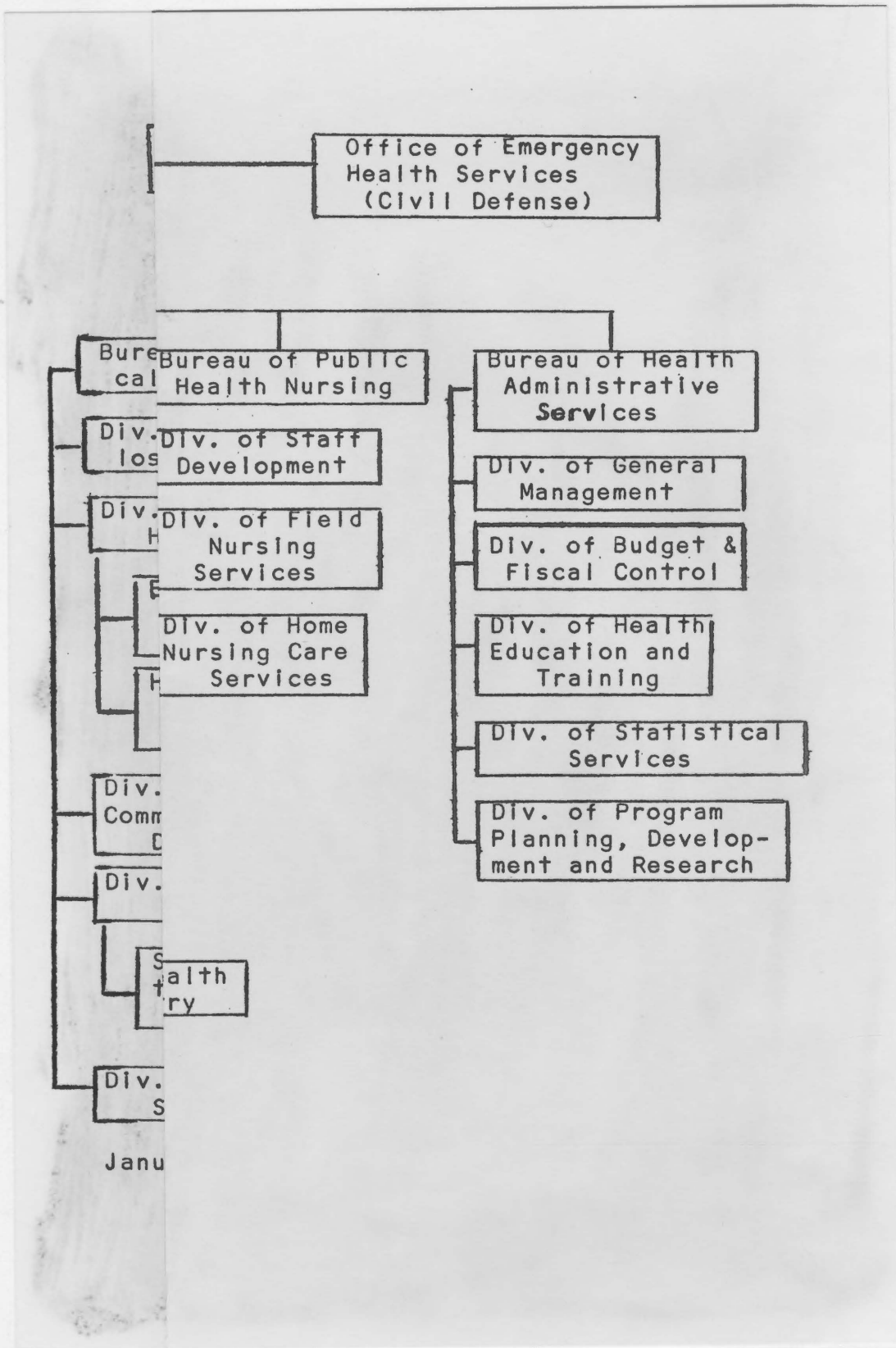
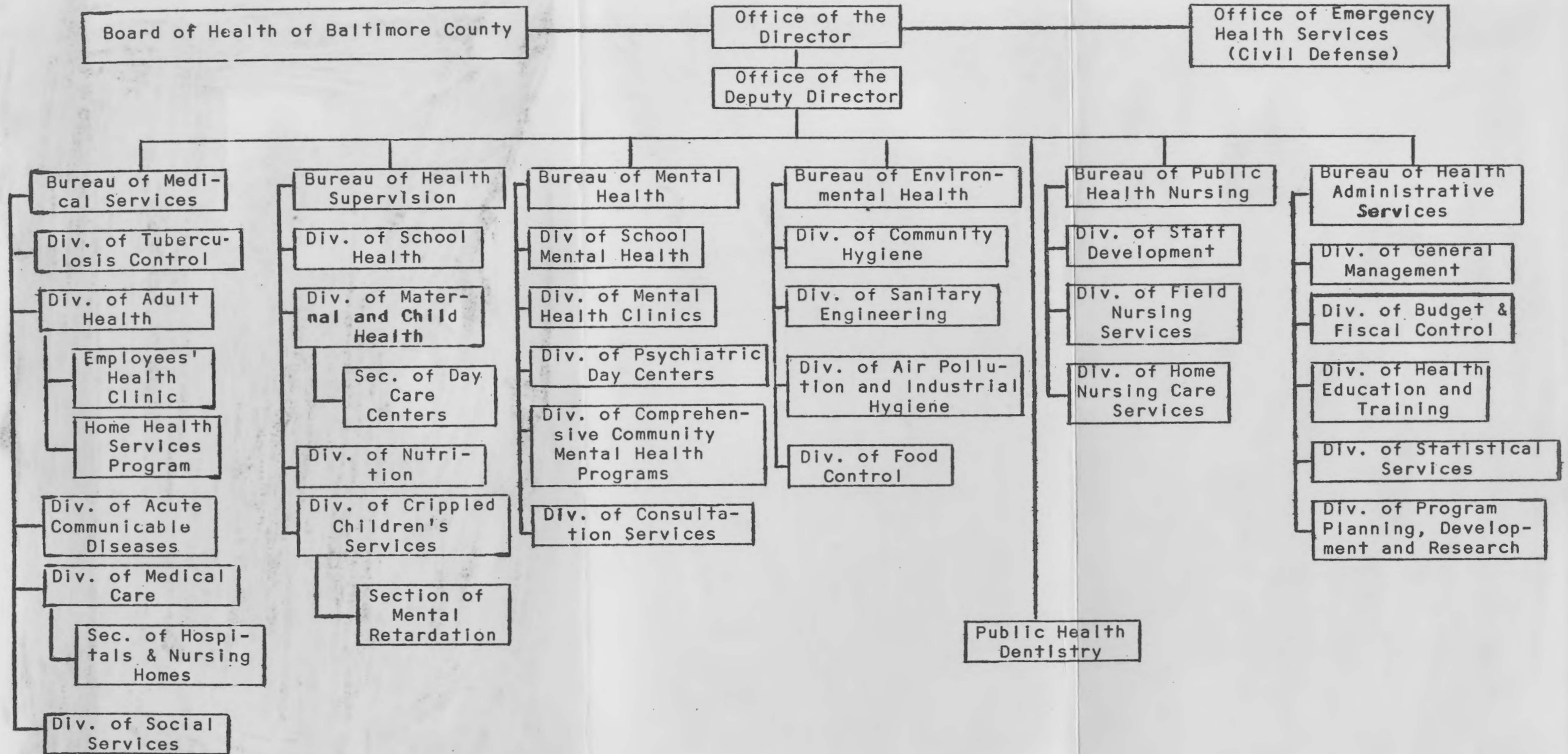


Figure 2. Organizational chart--Baltimore County Department of Health.

Baltimore County Department of Health

REVISED REORGANIZATION



January, 1969

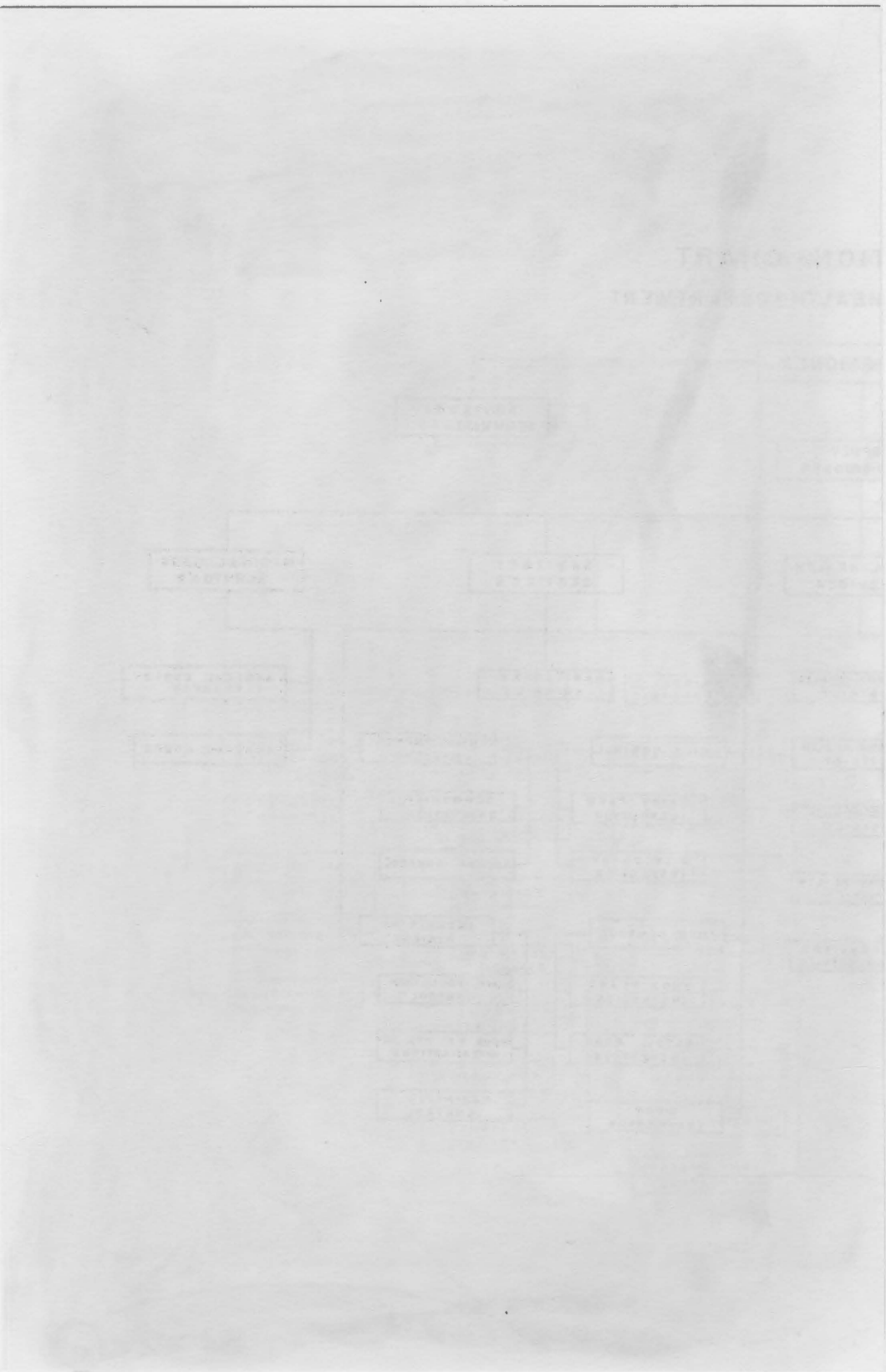
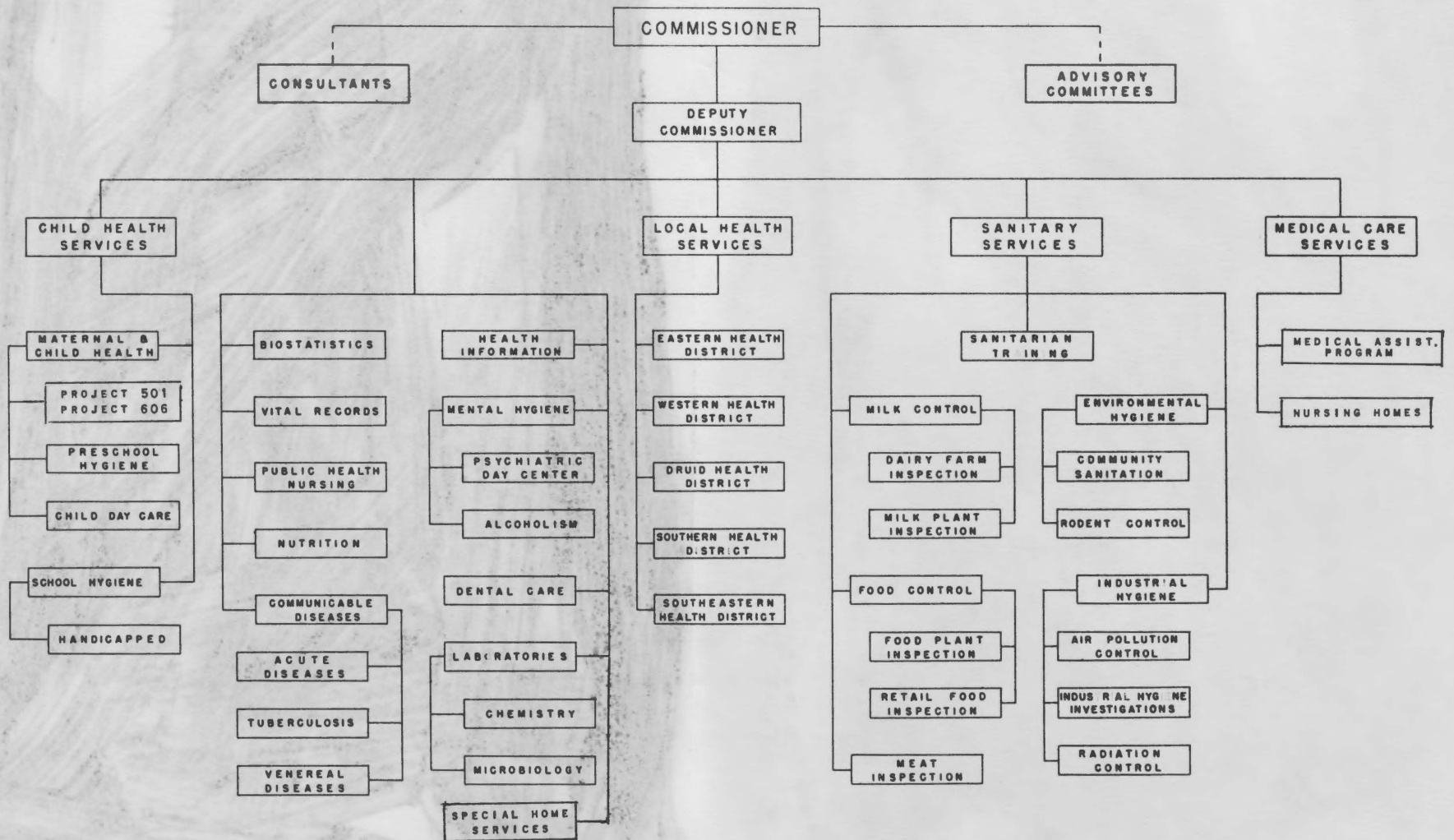


Figure 3. Organizational chart--Baltimore City Health Department.

ORGANIZATION CHART

BALTIMORE CITY HEALTH DEPARTMENT



Geographically, Baltimore is divided into five health districts. Each district has a suboffice of the health department which serves as a base for provision of direct services to a section of the city. The health districts are given guidance by the Director of Local Health Services.

CHAPTER IV

MARYLAND NUTRITION PROGRAMS

A. History

Professional nutrition services were introduced into the Maryland State Department of Health in 1939. The first nutrition position was placed in the Maternal and Child Health Program and was funded by the Children's Bureau. Soon thereafter, a position was funded for a Food Service Director responsible for supervision of dietary services in the state tuberculosis hospitals. Later, a second nutrition position was added, and in 1964 a nutrition position was funded in the Division of Mental Retardation (15).

Until 1966 the nutritionists remained in the Division of Maternal and Child Health. Following a management study, a recommended change in organization was implemented, and the service was made a separate division and placed under the Assistant Commissioner for Medical Care Services in the Bureau of Preventive Medical Services. This change has permitted nutrition programs to function in additional program areas. Accordingly, the Chief of the Division of Nutrition in the state has been integrating nutrition services into many programs not included in the Maternal and Child Health Division (15).

Over the years, money from the state has been used to employ nutritionists on a demonstration basis in county health departments. In a number of instances the county has assumed the financial responsibility

for the position at the end of the demonstration period. This was the way in which the first nutrition position in Baltimore County was established.

The first nutrition position to be established in the Baltimore City Health Department was funded by the Division of Food Control in 1942. Ten years later nutrition was placed directly under the Commissioner of Health. In 1953 it was shifted again to become a subdivision of preventive medicine. Presently, nutrition is directly under the Deputy Commissioner. Paradoxically, the Baltimore City Health Department annual reports have nutrition listed under Local Health Services, and yet the Chief Nutritionist's salary is in the budget of Child Health Services (16).

B. Staff

The state health department operates under a merit system which classifies all positions. Each state employee is required to take a civil service examination. The examinations taken by the nutritionists are based upon the test questions of the Professional Examination Service, American Public Health Association (13).

All nutrition and dietary personnel are located under the Assistant Commissioner for Medical Care Services. The Nutrition Division is within the Bureau of Preventive Medical Services, and the other two bureaus have positions for dietary consultants. The present state nutrition staff consists of the Chief of the Nutrition Division and two Nutrition Consultants. One consultant works on a state-wide basis and the

other is presently assigned to a three-county area on the Eastern Shore. A nutritionist is employed one day a week on a consultant basis for a special project. One nutritionist works specifically with the Division of Mental Retardation. Two Consultant Dietitians, one full-time and one part-time, work in the Division of Medical Facilities Development which is under the Bureau of Special Health Services. A Food Service Director is employed in the Bureau of Chronic Diseases (17).

Three of the counties in the Baltimore-Washington metropolitan area employ nutritionists: Prince Georges and Baltimore Counties each employ two and Anne Arundel County employs one on a part-time basis. Seventeen counties receive services from the Chief of Nutrition and the Nutrition Consultant in the state office (17).

The chief nutritionist position was the only one in the city until Baltimore was fortunate enough to receive funds for two Children's Bureau Projects; Maternity and Infant Care, Project 501 (designated as MIC), and Children and Youth, Project 606 (designated as C and Y). The MIC Project has a Chief Nutritionist plus three Staff Nutritionists. A Nutrition Consultant serves as coordinator of the nutrition services for the four C and Y subdivisions. She is a member of a core interdisciplinary team located under Child Health Services in the health department. The C and Y subdivisions are designated by the letters A, B, C, and D. Project 606 A has a Chief Nutritionist, a Clinical Nutritionist, and a Nutrition Aide. For 606 B, C, and D, there is only one part-time nutritionist since a budget freeze occurred before the nutrition positions for these C and Y Projects were filled (18).

C. Orientation

All of the Maryland nutritionists are involved in orientation programs. Within their own agency they provide nutrition orientation to other disciplines, particularly public health nurses. The state, Baltimore City, and Baltimore County nutrition divisions have been providing orientation to public health nutrition for dietetic interns from the United States Public Health Service Hospital in Staten Island, New York. These three divisions have also provided field experience for other graduate students in public health nutrition similar to that provided for the student. The state has had funds available for a nutrition residency program for persons with a college degree in foods and nutrition or institutional management who are employed with the understanding that they will later attend graduate school to study public health nutrition. This program not only helps extend nutrition services in the state but also aids in recruiting personnel (17).

D. Communication and Continuing Education

There is a monthly nutrition staff meeting with the Chief of the Nutrition Division presiding. Attending the meetings are the state nutrition consultants, county nutritionists, city nutritionists, and chief project nutritionists. The purpose of the staff meeting is to share nutrition materials and pertinent information concerning nutrition programs and services (17).

The chief of the state Division of Nutrition organized the Maryland Interagency Committee for Improved Nutrition in October, 1967. It now has a membership of 80, representing 27 different agencies concerned with nutrition. The purposes of the interagency committee are:

to promote nutrition services in Maryland through (a) sharing and exchange of program objectives, procedures, and information concerning materials, activities and plans related to nutrition to encourage interagency understanding, cooperation, and coordination; (b) understanding the objectives, policies, programs, relationships, and ethics of related professional groups; (c) cooperation and assistance to schools of home economics and schools of allied health professions of Maryland colleges and universities; and (d) continued education of professional personnel. It is a goal of the committee to identify and resolve through coordinated effort nutrition problems in Maryland (19).

Monthly meetings are held from the fall through the spring.

A monthly journal seminar was initiated by the state nutrition chief in the spring of 1968. The membership is composed of interested nutritionists and dietitians in the Baltimore metropolitan area. At each meeting members report on recent and pertinent journal articles (17).

The Maryland nutrition staff supports various professional organizations by membership and participation. Some of these organizations are: the Maryland Dietetic Association, American Dietetic Association, Maryland Home Economics Association, and the Maryland and American Public Health Associations.

E. Special Projects

Under the guidance of the Chief of Nutrition, a part-time nutritionist in the state Nutrition Division is organizing a comprehensive technical resource filing system on the subject area of foods and nutrition. This system is to be available to the entire Maryland nutrition staff including the county and city nutritionists (20). Also, a committee of nutritionists is working on a form which can be used by all the nutritionists in the state of Maryland to record their services and activities by means of a numbered code. The purpose of the coding system is to facilitate nutrition program planning. The record will not be maintained on a continuing basis; however, it is to be devised so that it can be used periodically for a time study (17).

F. State Nutrition Services

State nutrition services are integrated into a number of program areas; they will be discussed as they relate to the other areas. The role of the local nutritionists as well as of the state nutritionists will be defined in the discussion of the programs since the state programs influence the nature of the local programs.

Maternal and Child Health

Since a disproportionately large segment of Maryland's population is in the childbearing age, maternal and child health programs are important. Prenatal and family planning clinics are being conducted in each

of the 23 counties and in Baltimore. Maryland is fortunate to have two medical schools located in Baltimore, the Johns Hopkins University and University of Maryland Medical Schools. Not only do the medical students, interns, and residents conduct out-patient clinics within the hospitals, but the residents in obstetrics and gynecology are also available to conduct some of the prenatal clinics in the county health departments where obstetricians may not be available. Residents are presently conducting prenatal clinics in twelve counties in Maryland (21). In some of the prenatal clinics, the medical care includes nutritional counseling on the appropriate normal or therapeutic diets. Many of the patients appear unconcerned and/or uninformed about good food habits. Common problems of many women attending the prenatal clinics are excessive weight gain and anemia.

Baltimore City and the counties which have full-time nutritionists provide direct nutrition counseling in some of these clinics; however, time does not permit the nutritionists to attend all of the clinics. Consequently, the county and city nutritionists disseminate nutrition information through in-service education to the public health nurses who are in the clinics. The nutritionists also provide appropriate educational pamphlets and evaluate the nutrition information in educational materials from other sources which are used as aids for the nurses.

One of the oldest, most traditional services in public health is the well-child conference. This conference is provided more frequently than any other service. A public health nurse is present in all of the

conferences and a pediatrician is found in most. The well-child conference provides preventive medical care for the children in those families who cannot afford a private physician. Approximately 14 percent of the infant population in Maryland are attending the well-child conferences where they can receive immunizations and health supervision. The conferences are of particular importance since abnormal growth and development are often discovered, and a child can be referred elsewhere for a more thorough evaluation (21).

It would be desirable to have a nutritionist in the well-child conference since many mothers need help on infant and child feeding practices. However, the nutritionists cannot possibly attend all of the well-child conferences although some of the county nutritionists do attend these conferences on request. Here also, the public health nurse is depended upon to provide most of the nutrition information.

Day care. The present trend of mothers working outside the home has created a big demand for day care centers. In June 1968, there were 715 private day care centers licensed in the state. At this same time the Department of Social Services had 25 centers, and the Office of Economic Opportunity operated 33 child development centers and Head Start programs. Some of the centers operated by the Office of Economic Opportunity were organized specifically for migrant children (21).

The state health department day care personnel develop standards and regulations for day care services, and the local county and city health departments in Maryland inspect and license the centers. Nine day care

coordinators have been hired within health departments in the state of Maryland. One is a consultant in the state health department and the remaining eight are in local health departments. They provide consultation to day care center operators and conduct periodic workshops for operators and staff of the centers (21).

Some of the county and city nutritionists have been working with the coordinators to help improve the quality of the food which is being served in the day care centers by giving assistance in menu writing and by conducting workshops for the cooks and operators. The nutritionists have emphasized the importance of providing a nutritious meal at the center for the youngsters, particularly since it may be the only good one which many of the children get. Nutritious snacks have also been stressed.

Mental Retardation

Day care. Staff members of the Maryland state health department have recognized the need for day care for severely retarded children. Training and educational services for the mildly and moderately retarded are provided by the state and local departments of education. In 1961 the Maryland General Assembly passed a bill to provide funds to be matched by communities to develop day care centers for the retarded (22). There are now 33 of these centers located in 14 counties and in Baltimore (23).

In the Division of Mental Retardation there is a team of consultants working with this program. The personnel include a director, day care consultant, psychologist, public health nurse, health educator, social worker, and nutritionist. Other personnel available for consultation are a speech pathologist, occupational therapist, and physical therapist (23).

Since many mentally retarded children have malocclusion, difficulties in swallowing, and other problems with eating, the nutritionist is helpful in modifying the diet to make it possible for them to eat. Frequently, these children also have problems with weight and anemia. The nutritionist is available for consultation to any of the day care centers on these problems. Each year mandatory workshops for new teachers and operators are conducted by the consulting members of the team (22). The nutritionist provides information on the nutritional needs of the mentally retarded stressing how foods, food preparation, and eating can be effective teaching aids.

Phenylketonuria program. The phenylketonuria program is also under the Division of Mental Retardation. The Guthrie screening test was begun in 1964 on a trial basis in four Baltimore hospitals. In June, 1965, a bill making the Guthrie test compulsory for all newborn infants was passed by the state legislature (24). At present, there are approximately 30 diagnosed cases of phenylketonuria in Maryland. These patients are followed by the team of consultants in the division. The public health nurse and the nutritionist work directly with the family, making frequent home visits to monitor the phenylalanine intake and blood level of the

child. The nurse collects blood samples so that phenylalanine levels can be determined in the state laboratory. The nutritionist checks a food record which is kept by the mother three days prior to each visit, to see if the prescribed level of phenylalanine has been maintained, and answers any questions the mother has pertaining to the diet (23).

Maryland is fortunate to have two institutions with facilities and staff to treat metabolic disorders, Johns Hopkins Hospital and University of Maryland Hospital. When a phenylketonuric infant is found, the family selects one of the two institutions to follow the child. The public health nurse and the nutritionist provide a continuing liaison between the hospital-based services and the family. When they visit one of the children with phenylketonuria, the pediatric specialist in the selected hospital receives the reports on the blood levels and the diet. From the reports he makes recommendations for diet stability or change. Each child is seen by his specialist on a regular basis (23).

The team in the Division of Mental Retardation has other responsibilities in the phenylketonuria program. There are two annual meetings for the parents of the children conducted by one of the specialists at which the team members are available to answer any questions. Also the team members are often requested to present seminars describing the program to interested parties since it is a model program for the treatment of phenylketonuria (23).

School Health

The school health program is an important component of the child health program in Maryland. Excellent cooperation between the state departments of health and education in formulating school health programs has carried over to the local level (25). In the rural counties the public health nurse routinely visits the schools in her district. In the metropolitan counties of Baltimore and Montgomery and in the city of Baltimore, the majority of the elementary and secondary schools have school nurses who are responsible for the school health program (26).

In Baltimore County some of the school nurses are paid by the Board of Education and some by the local health departments. All school nurses, however, receive medical supervision from the county health department. The school nurse is involved with counseling, with helping teachers to learn to recognize health deficiencies in the classroom, and with setting up such activities as vision, hearing, and tuberculosis screening (26).

Nutritionists are occasionally asked to talk with school classes and to appear on career day programs. The nutritionists in Baltimore County are presently working with some of the school nurses and principals to develop a program for overweight teenagers. The nutritionists will be responsible for nutrition counseling (27).

Crippled Children's Program

The main objective of the Crippled Children's Program is "to prevent crippling conditions by early case finding and treatment and to

habilitate or rehabilitate each handicapped child to the maximum extent of his capabilities" (28). Since the services provided by the Crippled Children's Program are for chronic rather than acute conditions, they are often very costly. The program includes services in orthopedic and plastic surgery, conservation of vision, and conservation of hearing and speech. Other crippling conditions covered by the program are untreated phenylketonuria, cystic fibrosis, diabetes, nephrosis, heart defects, epilepsy, and cerebral palsy (28). None of the nutritionists in Maryland are specifically assigned to the Crippled Children's Program; however, a number of the conditions covered under the program require nutrition counseling. In addition, crippled children are inclined to become overweight making habilitation or rehabilitation more difficult. Thus, state, county, and city nutritionists are periodically requested by public health nurses to assist them in counseling patients on modified diets in the Crippled Children's Program. This is done in case conferences with the nurse or directly with the patient on a home visit with the nurse.

Nursing

The state health department, the Baltimore health department, and some of the more complex county health departments have Divisions of Nursing employing a Chief of Nursing, Assistant Chief, and a number of consultants who are specialists in such fields as tuberculosis, mental health, and pediatrics. The Baltimore City and more complex county departments have health districts which employ supervisory nurses, (the number based upon the number of staff nurses), who give guidance to the public

health staff nurses. The rural counties with fewer nurses have a less complex organization. The staff nurses usually conduct a generalized nursing program, receiving consultation from the nursing consultants when they need assistance in a specific subject area (26).

Public health nursing services are basic to most public health programs. The nurses have more contact with the public than do other allied health disciplines. Since nutritionists are in short supply, they depend upon the public health nurse to aid them in teaching nutrition. Maryland nutritionists teach nutrition to nurses through formal in-service classes, case conferences, and demonstrations as they instruct patients. Educational materials, which have been prepared by Maryland nutritionists, are used by many of the public health nurses.

Chronic Disease

Increased longevity has resulted in an increased number of people who develop chronic diseases. At the present time, the greatest number of deaths in Maryland are caused by chronic diseases (2).

Maryland has three chronic disease-rehabilitation hospitals which are administered by the state health department. A Food Service Director placed in the Bureau of Chronic Diseases is director of the food service in these hospitals. She visits the hospitals frequently to provide administrative guidance.

Early detection of disease is one of the most important objectives of the Bureau of Chronic Diseases. Prevention is not always possible, so early detection and treatment to prevent ensuing complications and

deterioration are the primary goal. Screening tests to detect diabetes, lung cancer, cervical cancer, leukemia, glaucoma, and tuberculosis are now being used. The bureau director indicated that with increased emphasis on early disease detection and a resulting increase in the number of cases being treated, the full-time services of a nutritionist would be helpful. Since many of the chronic diseases require dietary modification for treatment, this position would appear to be needed (29).

Respiratory Disease. Tuberculosis is the most common of the respiratory diseases although emphysema and other diseases are becoming more prevalent. In 1967 a rate of 32.2 new cases of tuberculosis per 100,000 population was reported in Maryland. The national rate for 1967 was 23.1 (30). Baltimore has the unenviable record of having the highest rate of tuberculosis of any city of comparable size in the United States. The tuberculosis rate for 1967 was 75.1 newly reported cases per 100,000 population. As would be expected, the greatest number of tubercular patients are found in the inner city of Baltimore where poor housing prevails and incomes are inadequate to provide good nutrition (31).

The tuberculosis control program in Maryland has included intensive screening to find new cases. More and more treatment by chemotherapy is being administered on an out-patient basis. Since Baltimore has an extremely high tuberculosis rate, it has been selected as a trial area by the United States Public Health Service to develop a data processing system for tuberculosis registers. This system facilitates management of the patients requiring services (32).

The Food Service Director in the Bureau of Chronic Diseases serves as the director of food service for the two state tuberculosis hospitals. Diet plays an important part in the rehabilitation of a tubercular patient. In the tuberculosis hospitals the patients receive a high caloric, high protein diet consisting of 3200-3500 calories and 100-130 grams of protein (33). Although a nutritionist is not presently assigned to this program, the director of the bureau feels that a nutritionist could be effective in counseling out-patients about their diets (29).

Special Health Services

Maryland has placed emphasis on the provision of medical care services for its indigent and medically indigent population. In 1946 the Bureau of Medical Services (now the Bureau of Special Health Services) was established in the state health department to administer a medical care program and also to inspect and license all hospitals and nursing homes. Consequently, with the advent of Titles XVIII and XIX (Medicare and Medicaid) of the Social Security Act, Maryland was soon prepared to accept the federal aid. Medicare and Medicaid became a part of the medical care services July 1, 1966, with about 148,000 eligible persons. The increased availability of federal funds permitted the eligibility level to be raised, and by December 1, 1967, approximately 277,000 were eligible (34). Of this number approximately 64.1 percent were Baltimore residents. Since Baltimore makes up only 24.5 percent of the total Maryland population, there is clearly a disproportionately large concentration of eligible recipients living there (6).

Also placed in the Bureau of Special Health Services is the Division of Medical Facilities Development. The personnel in this division are responsible for the licensure of public and private hospitals, nursing homes, extended care facilities, and care homes, including facilities which meet standards for participation in the federal programs. The personnel in this division also review architects' drawings for buildings prior to construction to see that physical requirements meet the state and federal standards (35).

There are two Consultant Dietitians in this division, one full-time and one part-time. The part-time consultant is responsible for the inspection and certification of the food service in Medicare facilities. The full-time consultant is responsible for the inspection and certification of the remaining medical facilities in the state with the exception of those in Montgomery County where the Food Service Director in the Bureau of Chronic Diseases is responsible. The dietary consultants provide workshops three times annually for approximately 50 dietitians who are providing consultation to small hospitals and nursing homes across the state (35).

G. Baltimore City Nutrition Services

The large numbers of low-income families residing in the inner city of Baltimore have more health problems than the normal population. City health department personnel have submitted program proposals to the Children's Bureau for Maternity and Infant Care and for Children and

Youth Projects designed to serve the inner city population. With the recent recognition of prevalent malnutrition in the United States, personnel in the city health department have taken steps to investigate the extent of malnutrition in Baltimore. In addition a Task Force on Nutrition, organized to help alleviate the problem of malnutrition, has become operative.

Maternity and Infant Care

The comparatively high number of infant deaths, premature births, and illegitimate pregnancies in the city of Baltimore show the need for the Maternity and Infant Care Project (MIC Project). The Baltimore City Health Department MIC Project was funded by the Children's Bureau in 1964 as the first MIC Project in the United States. One indication of its success is the fact that many more women are coming for prenatal care in the first trimester rather than waiting until the third trimester, as had been the practice before MIC. Each woman who comes into the central MIC Project clinic sees an obstetrician, a social worker, a public health nurse, and a dentist. The nutrition staff see patients referred by the physician who are anemic, under or overweight, diabetic, or otherwise in need of nutrition counseling. The patients are then referred to the district health clinic nearest their home where they attend prenatal clinics until term. The staff nutritionists provide follow-up counseling for the MIC patients in these district prenatal clinics. All MIC infants are seen at least six times during the first year in well-child conferences or in the Children and Youth Projects. The nutritionist routinely sees

them in the health district clinics at six months of age, although referrals are usually made to the nutritionist before six months in cases of failure to thrive. The mothers are followed in the district post-partum clinics where services of the family planning clinics are explained (36).

Baltimore has two schools, one junior high and one high school, which girls may attend during later stages of pregnancy. One MIC nutritionist works closely with this group, teaching a three-day class each semester on the recommended diet for the pregnant teenager and on infant feeding. The MIC nutritionists also provide in-service education on nutrition for the project nurses and other staff personnel (36).

Children and Youth

When funds for Children and Youth Projects became available in 1965 under the Social Security Amendments, staff members of the Baltimore City Health Department submitted a project proposal to Children's Bureau which was approved May 16, 1966. This project, number 606, provides comprehensive health services in very low-income areas of Baltimore for all eligible children under 18 years. There are four pediatric centers which are designated as 606 A, B, C, and D. Each of the centers is associated with a parent hospital and each has a multidisciplinary team of medical and allied health personnel (37). Another grant, number 609, was approved for the Johns Hopkins Hospital. This project proposal was written and approved separately from Project 606 and Johns Hopkins personnel are primarily responsible for its administration; however,

consultation from the personnel of the health department is available upon request (18).

One of the requirements of Children's Bureau was that an interdisciplinary core team be stationed in the Baltimore City Health Department under Child Health Services. This team functions primarily on a consultative basis. The Nutrition Consultant on the team is coordinator for nutrition services in all of the pediatric centers. Only Project 606 A is well staffed with nutrition personnel since there was a budget freeze before the other three centers had recruited the nutrition positions. The coordinator was able to get a part-time position budgeted and filled by a nutritionist who provides counseling in 606 B, C, and D with the assistance of the nutrition coordinator (18).

The staff members of project 606 A provide nutrition counseling to patients as they are referred by other disciplines. They see every child at age 6 months, 18 months, 4-5 years, 8 years, and 14 years for nutrition evaluation (38). The part-time nutritionist and nutrition coordinator see patients in the other three centers by appointment unless the patient is referred the day they are in the clinic. Unfortunately, many of these patients do not keep their appointments. The part-time nutritionist works with mothers on food purchasing and preparation in one of the clinics. She demonstrates weekly the preparation of a low-cost dish while the mothers wait with their children to be seen by a pediatrician.

The majority of the patients referred to the nutritionists in all of the C and Y clinics are anemic, over or underweight, or have poor food habits in general. Other children referred may have metabolic disorders, diabetes, or allergies. The infants who fail to thrive are not being referred; however, the nutrition coordinator is working with other disciplines in the clinics to get these patients referred for nutrition counseling (18).

Task Force on Nutrition

The nation has become concerned over the nutritional status of its people as a result of the U. S. Citizen's Report on Hunger, the nutritional status studies being conducted by the United States Public Health Service, Senator McGovern's Committee hearings, and other surveys and reports. Citizens in the state of Maryland have also become concerned, particularly in Baltimore.

In February, 1968, the Children and Youth Projects across the nation were asked to participate in a nutritional survey. Data on heights, weights, and hemoglobins relative to age and sex were gathered on all the infants and children seen in the Baltimore C and Y centers during the months of March and April, 1968. When the data for 2,000 children were tabulated, using Harvard tables for height and weight to calculate percentiles, it was found that many of these children were stunted in both height and weight. The mean hemoglobin level for this cross-section was 1.0-2.0 grams percent below accepted normal levels (39).

This study and other investigations concerned with collecting data on participation in school lunch and food stamp programs led the Baltimore City Deputy Commissioner of Health to report the findings to the mayor in October, 1968. Consequently, the mayor appointed the deputy commissioner to head a Task Force on Nutrition which had its first meeting February 19, 1969. Some of the objectives of the task force are: (1) to review existing resources for food distribution and nutrition education and their expansion and effective utilization, (2) to formulate guidelines to assist school principals in identifying children eligible for school food programs, (3) to support the efforts of the Department of Education to seek additional funds for free or reduced cost school lunches, (4) to endorse federal and state legislation to expand school lunches and liberalize the food stamp program, and (5) to upgrade the nutritional status of preschool children and the city's needy through modification of food stamp and Social Services Agency programs (40).

The nutrition staff is well represented on the task force. Nutritionists serving are the chiefs of nutrition from the state and city health departments plus the C and Y nutrition coordinator. Other members represent the mayor's office, health, education, agriculture, welfare, housing, women voters, and other agencies and organizations (40).

The proximity of Maryland to Washington, D.C. makes it easily accessible for most surveys and investigations originating from the Capitol. Publicity about the Nutrition Task Force, endorsement of its goals by the two senators from Maryland, and an on-site visit by several

government officials to Baltimore inner-city schools, where school lunches are not available, all indicated that representatives from the health agencies of Maryland would be asked to testify before the United States Senate Committee on Nutrition and Human Needs. In preparation for testimony, the state and city Chiefs of Nutrition, state Nutrition Consultant, and Chief Nutritionist of Project 606 A went to Washington in April to hear the testimony of the Washington, D.C. Health Director and the Chief Nutritionist before senators on the Select Committee on Nutrition and Human Needs. This testimony, subsequent to an on-site visit which had been made in Washington, was in explanation of the efforts being made to alleviate malnutrition in the D.C. area. The student also traveled to Washington with the Maryland nutritionists for the testimony.

H. Voluntary Nutrition Services

Meals-on-Wheels

Although the Meals-on-Wheels program in the Baltimore metropolitan area is not a program administratively directed by the health department, it has a definite health and nutrition component. Also, since the local health departments in Maryland are responsible for the inspection of all eating and drinking establishments, the Meals-on-Wheels kitchens are inspected by sanitarians from the health department.

Meals-on-Wheels, Incorporated, was organized in 1962 by the Maryland Dietetic Association, Maryland Home Economics Association, and

the Baltimore Chapter of the National Council of Jewish Women. It is a food service for the homebound, elderly, handicapped, or convalescing residents of the Baltimore metropolitan area. Presently, there are seven Meals-on-Wheels centers, all located in church kitchens. Another kitchen is to begin service in September (41).

The policy making body for this service is the Baltimore Metropolitan Meals-on-Wheels Committee. The Chief Nutritionist in the Baltimore health department and the Director of Nutrition of the Baltimore County Health Department serve on the committee (41). The two nutritionists who are serving on the policy making committee have assisted in writing menus and have given advice concerning the program.

The position of program coordinator was funded in 1966. The central intake office and position of coordinator are funded by: Associated Catholic Charities, Inc.; Associated Jewish Charities, Inc.; Community Chest of Baltimore Area, Inc.; a grant from the Maryland Commission on Aging; and private contributions from individuals and organizations. The present sponsoring groups are: Baltimore Chapter of the National Council of Jewish Women, Lutheran Social Services of Maryland, Inc., Presbytery of Baltimore, and Methodist Board of Christian Concern (41).

Two meals are served Monday through Friday. The service is staffed primarily by volunteers from church groups, lodges, women's clubs, and civic organizations, and they are responsible for packing and delivering the food to the clients. The only paid employees are the cooks in

the centers and the coordinator of the total program who is located in a central office. The coordinator is responsible for screening all applicants to determine whether the service is really needed and the amount of money the prospective client is capable of paying. The minimum payment is \$7.50 per week and maximum is \$10.00 (41).

In 1968 the overall program served approximately 133,000 meals to 1,095 clients. The two meals consist of a hot noon meal and a cold supper. These meals are planned to meet at least two-thirds of the recommended dietary allowances for each client every day (41).

CHAPTER V

ANALYSIS OF STUDENT'S PROFESSIONAL DEVELOPMENT

The student was exposed to a variety of nutrition experiences in Maryland. The opportunity of active participation did not occur as often as the student had anticipated; however, the chance to observe many activities presented excellent opportunities for learning. Since the student had previous public health experience, an orientation to more programs and services was valuable to her professional development.

A. Consultation With Other Professional Workers

One day was spent with the state Consultant Dietitian who had scheduled a visit to an extended care facility. The part-time dietitian, who was giving consultation one day each week to the cooks and to the administrator, was there also. During a conference the administrator explained some of the food service problems. Rapport was established as the consultants listened to the problems and then information was offered by them which could have been helpful in solving the problems. This experience indicated how frustrating consultation can be in that advice is offered but may be rejected by the consultee. The student felt that this was a valuable experience since consultation is an important function of a nutritionist. She learned that careful attention, empathy, and tact are essential components of successful consultation.

B. In-service Education

A day was spent in a chronic disease hospital with the state health department Food Service Director who supervises the dietary service in health department hospitals. In the afternoon, the director conducted an informal staff meeting, which included in-service education, with the Chief Dietitian, Therapeutic Dietitian, and Food Service Supervisors. She discussed interpersonal relationships, attempting to convey to the supervisors the kinds of supervisory responsibilities which they should take in the kitchen without depending upon the dietitians for all decision making. Since the student has not felt comfortable with administrative responsibilities, probably because of lack of practice in this field, this experience was helpful since it gave her an opportunity to observe a knowledgeable administrator at work. The student had previously visualized in-service education as a more formal teaching situation. This experience demonstrated that in-service education can be very effective when conducted informally.

C. Group Work With Nonprofessional Groups

A well-child conference was attended with the two Baltimore County nutritionists. The children and mothers were interviewed by public health nurses before a conference with the pediatrician. Afterward, while the group of mothers waited to see the doctor, the nutritionists talked with them about child feeding and normal child nutrition. The information offered was relevant and the mothers were obviously interested.

Charts were used as visual aids, and the ones used were appropriate for this group. The student was impressed by the fact that visual aids are helpful not only in conveying information but also in gaining the attention of the audience. Refreshments, consisting of oatmeal bars and reconstituted dry milk with presweetened fruit flavoring, were served, and the mothers were given the recipes. The student wondered whether or not preparation of the snack was a good use of the nutritionist's time. However, since the refreshments were used to stress the importance of nutritious snacks for children, they were effective enough to compensate for required preparation time. This demonstrated how refreshments can be used as an additional teaching tool.

The student's previous experience in well-child conferences had included time-consuming individual counseling. This well-child conference demonstrated how a group approach could facilitate seeing a number of people in a short time. The numerous activities in which nutritionists are involved make this type of approach the only one feasible in many instances.

The Director of Nutrition in Baltimore County has been working with groups of Head Start parents in collaboration with a representative from the county Food Stamp Program. The student attended one of these meetings in which a food stamp representative provided information to the group of 24 parents on the eligibility standards for receiving food stamps. The nutritionist spoke on the food requirements of young children, demonstrating with bar graphs the difference in food value of various

snacks, such as milk versus a coke and a peanut butter sandwich versus a jelly sandwich. The bar graphs used in this manner were effective teaching aids. The student had seen the bar graphs previously, and had wondered how they might be used effectively as visual aids since they appeared too complex for most groups. However, watching the nutritionist explain the bar graphs in this context proved to the student how well they could be used.

The nutritionist also discussed low-cost food buying, suggesting the purchase of non-fat dry milk in place of whole milk in order to reduce food cost. Since anemia is prevalent among the Head Start children, the nutritionist suggested ways that more iron might be included in the diets. The nutritionist served refreshments consisting of oatmeal-raisin cake and reconstituted non-fat dry milk with added chocolate and explained to the parents the kind of milk they were drinking, emphasizing that the milk can be camouflaged if the children refuse to drink it plain. The student judged this meeting as beneficial in teaching her methods for working with the nonprofessional group. The nutritionist spoke on a level which was easily understood by the audience, and she included very few major topics. The student realized that including fewer topics probably meant that more was absorbed by the group. Response from the parent group was attained by asking questions throughout the talk. This technique kept the parents listening to every word and proved effective in arousing interest in the nonprofessional group.

Recently the Baltimore County Nutritionist has been visiting the 30 county day care centers with the county Day Care Supervisor. During

this experience the nutritionist recognized a need for a workshop on child feeding and menu planning for the day care operators and cooks. Subsequently, workshops, to be held in two different locations in the county, were planned. At each of the workshops, the Baltimore County Director of Maternal and Child Health discussed the psychological aspects of child feeding. The nutritionist adapted the National Dairy Council filmstrip, "Feeding Your Young Children," for use with this group, and the student participated by discussing menu planning. Afterward, the participants were divided into groups and asked to improve some examples of poor menus. Refreshments, consisting of raw vegetables and small portions of cooked ground beef and liver strips were served. These foods were served attractively and comments on the evaluations proved their effectiveness as teaching aids.

This experience impressed upon the student that much planning and preparation is required to conduct an effective workshop. The variety of teaching methods used in the workshop--filmstrip, verbal discussion, active participation, and social period--made it both interesting and informative to the participants. Only two topics were discussed, child feeding and menu planning, which again emphasized to the student the importance of limiting the variety of subject matter at any one time. Evaluation forms were used for a critical analysis of the workshop. Information from this type evaluation can be used effectively in planning.

Three of the Children and Youth core team members, the nutritionist, physical therapist, and health educator, have been working with

two groups of overweight teenage girls. The groups were organized because of the large number of referrals being made by the physicians to the nutritionists in two of the C and Y clinics. Group meetings are held weekly in each of the pediatric centers. Also, individual counseling has been offered periodically by either the part-time nutritionist or the nutrition coordinator. The combination of the individual counseling and the group meetings seems to be quite successful since the girls have been losing more weight since the groups started meeting. The opportunity to attend several of the meetings was provided. In one of the meetings, the nutrition coordinator talked with the group informally, getting a recall of what they had eaten in the past 24 hours. Many of the girls were obviously ashamed to tell what they had eaten. Some stated that they had not realized how much food they had consumed. The student suggested that they keep a written record to remind themselves how much they were eating. In another meeting, the part-time nutritionist provided a combination of food models and actual foods for the girls to plan low-calorie, nutritious breakfasts.

The student felt that the 24-hour recall was not an effective method to use with this group. Some of the girls were obviously not telling the truth and others were not concerned about the huge amount of food consumed. This method should be used in a private counseling session to give the nutritionist more time to discuss the overeating with each girl. In the other meeting, when the girls planned a breakfast, they were more interested. The visual aids were helpful in getting the attention of the group.

D. Conferences for Planning

An opportunity to attend a conference with the Baltimore County Nutritionist and the state Nutrition Consultant was provided. The county nutritionist had been collecting and evaluating literature used by the public health nurses in well-child conferences and prenatal clinics. In reviewing the material, she found that much of it had contradictory nutritional information which was presented unattractively. Subsequently, she requested a conference with the state consultant to discuss the educational materials. The discussion demonstrated the importance of evaluating and updating materials and also gave the student some pointers on how materials should be evaluated.

Since there has been so much publicity about malnutrition in Baltimore, the Baltimore County nutritionists have received several phone calls from interested citizens who questioned the extent of malnutrition in the county. The student was asked to help define some ways that information on the extent of malnutrition in the county could be obtained by the nutritionists. Conferences were held with the two nutritionists, two county public health nurses, and the county Director of Maternal and Child Health, and the following approaches were suggested by the student as possibilities for use in evaluating the extent of malnutrition in Baltimore County:

1. Obtain verbal information from the supervisory public health nurses, school nurses, and teachers on their impression of the extent of underfed families in their districts.

2. Examine reports from clinicians concerning children seen in well-child conferences who have abnormalities that might be related to faulty nutrition.

3. Get information on age, height, weight, and hematocrit from the records in the Baltimore County well-child conferences on all children from birth through six years.

4. Find the number of free lunches being served in each school.

5. Find the number of families participating in the food stamp program.

6. Obtain access to health records of children in day care centers and Head Start Centers to record age, height, weight, and hematocrit.

7. Obtain information from patients in prenatal clinics on amount of money spent on groceries each week.

8. Find how many families are recipients of some kind of welfare payment.

The nutritionists anticipated receiving funds to hire a nutrition student for the summer to pursue some of these suggestions. This was a valuable project since it made the student aware of the places where information on the health status of the population might be found. During the conferences, she realized that nutritionists are not the only health personnel who are concerned about malnutrition. However, the student did conclude that now is the time for nutritionists to provide the leadership necessary to alleviate malnutrition in this country rather than waiting for someone else to take the responsibility.

The student and nutrition coordinator of the C and Y Project attended a planning meeting pertaining to the financial feasibility of continuing a program for overweight teenage girls. Other core members of the C and Y Project attending the meeting were the Director of Child Health Services, administrator, physical therapist, health educator, and Director of School Hygiene. The nutritionist, physical therapist, and health educator presented a proposal for a summer program planned to supplement a program started during the school months. The program had consisted of weekly meetings which included an exercise regime directed by the physical therapist, nutrition counseling given by the nutritionist, and personal hygiene and appearance instruction provided by the health educator. The summer plan included swimming, other sports, and activities such as picnics.

After the program proposal was presented, questions from the team indicated that all aspects of the program had not been considered. For example, neither the swimming pool nor the gymnasium needed for the program had been decided upon or confirmed. Consequently, final plans for financial assistance could not be made. The conference demonstrated the complexities of planning such programs and the importance of detailed planning before asking for financial assistance. The contributions of the different disciplines brought out different needs in planning, demonstrating that the interdisciplinary approach to program planning and problem solving can increase effectiveness. Having had this experience, the student entertained the idea that health agencies should use the

interdisciplinary approach, in which all disciplines express their opinions, more often.

E. Counseling Nonprofessional Persons

The Baltimore County Nutritionist attends one prenatal clinic each week to provide nutrition counseling to those patients referred by the physician. The student observed the nutritionist as she counseled several patients. The nutritionist was effective in talking to the patients; however, she was working under a handicap since she did not have access to the patients's medical record. Her counseling would probably have been more realistic if she had been able to review the medical history of the patient; and in many cases she could have added pertinent comments to the record. This situation made the student aware that breakdown in communication does exist even when professional people are working together toward a common goal. The circumstances in this clinic also emphasized the importance of joint planning and execution by all disciplines involved in the patient's care.

The part-time nutritionist serving C and Y Projects B, C, and D provided a clinic experience in one of the Comprehensive Pediatric Community Centers. During the time she was not counseling patients, she gave a simple food demonstration to the mothers in the waiting room. She used recipes which require low-cost ingredients and distributed these recipes to the mothers as she prepared the dishes on a hot plate, her only cooking equipment. From the comments received, it was obvious that the mothers enjoyed the demonstrations and looked forward to them. The

student was fascinated to see how the simple demonstration could attract so much attention and interest. The ingenuity of the nutritionist in this demonstration period taught the student that an elaborate kitchen is not necessary to give an effective demonstration.

Several patients arrived at the clinic for dietary counseling during the food demonstration so the student provided the counseling. The patients had been placed on a calorically restricted diet by their physicians because they were overweight. Previous experience and competence in therapeutic diet counseling made this an enjoyable experience.

F. Analysis of Participation in a Specific Activity

The nutrition coordinator for the C and Y Project has been serving as a consultant to a church committee which was planning a kitchen for a Meals-on-Wheels Program. Part of her responsibility included the compilation of lists of small and large equipment which would be needed to serve 50 clients. The approximate cost of the equipment was needed before the committee could decide whether or not to continue planning for the kitchen. The student was asked to assist in preparing an estimate for the committee. Two of the kitchens, which are now in operation, were visited with the Nutrition Consultant. An inventory of equipment was made in each of the kitchens listing the size and brand names of the equipment which had been used successfully. The cooks and volunteers were asked if they needed extra equipment or if there were any unused pieces. Additional refrigerator and freezer space was the greatest need

in the opinions of the cooks and volunteers. A visit was also made to the church for which the kitchen was being planned to see the room which had been designated for the kitchen and what equipment was already present in the room.

The nutritionist arranged a meeting with a sanitarian from Food Control in the Baltimore health department. He was asked about the regulations which were required for the equipment. The regulations are surprisingly few: a three compartment sink for dishwashing, thermometers for refrigerator and freezer, and a hand sink. A hood for the range was recommended but not required.

After reviewing reference materials, the student compiled a preliminary list of equipment prior to visiting a large food service equipment company. The price for the equipment quoted by this company was approximately \$6,000. The nutritionist had the impression that the church would not make this large an investment in the program.

The student was subsequently informed about a man with the Baltimore County Board of Education who was responsible for selling used equipment removed from school kitchens that were being converted to satellite food service. During a telephone conversation with the gentleman the student was informed about used equipment available for sale at a greatly reduced price; however, neither exact equipment available nor exact prices were obtained at this time.

Final suggested lists of large and small equipment were compiled prior to attending a meeting of the church committee. Discussion of equipment was on the agenda; however, other parts of the meeting consumed

too much time and the equipment discussion was placed on the agenda for the next meeting. Consequently, the nutrition student gave the equipment lists and the other information to the committee chairman.

The student thought this project was appropriate in broadening her experience in institutional consultation. She learned more about the basic equipment needed for a small food service facility. Also, appreciation was gained of the need of voluntary groups who sponsor such programs. This committee could have easily been misled if the estimate from an equipment company had been their only resource. The student now feels more confident in providing such assistance when more expert help is not available.

CHAPTER VI

SUMMARY

This thesis has included a discussion of factors pertaining to health programs and services (with particular emphasis on those with a nutrition component) in Maryland. Activities planned by nutritionists in health agencies helped the student to reach the objectives of the field experience.

Since the student had gained an understanding of the general organization of a state health agency during previous experiences, emphasis was placed on a variety of observations and experiences in health agencies on the state and local levels to broaden her understanding of the interrelationships between the two levels. The importance of learning about the agency for which one works and the population with whom one works made an impression on the student nutritionist.

An understanding of Maryland's health program was derived through conferences, personal interviews, and readings. On the local level, in the Baltimore County and the Baltimore City Health Departments, observation and participation in various nutrition programs and services helped to strengthen the student's capabilities as a nutritionist. An opportunity to observe nutritionists as they provided dietary counseling and worked with low-income groups helped to teach the student a variety of methods which can be used in carrying out these functions. Learning about program areas with which the student was unfamiliar was particularly

advantageous. The programs of specific interest were the phenylketonuria program, Meals-on-Wheels Program, and Maternity and Infant Care and Children and Youth Projects.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Baltimore City Health Department 1966 Operational Plan. Baltimore City Health Department, Baltimore, Maryland.
2. Division of Biostatistics 1967 Maryland Annual Vital Statistics Report. Maryland State Department of Health, Baltimore, Maryland.
3. Department of Economic Development 1966 Maryland at a Glance. Tourist Division, Department of Economic Development, Annapolis, Maryland.
4. United States Department of Commerce 1968 Population Estimates, Summary of Demographic Projections, Series P-25, No. 388. United States Department of Commerce, Washington, D.C.
5. Maryland State Planning Series 1967 The Population of Maryland--Projections to 1980, Publ. 140. Maryland State Planning Department, Baltimore, Maryland.
6. Peeples, W. J. 1969 Statement on 1969 Budget Request. Maryland State Department of Health, Baltimore, Maryland. (Mimeographed.)
7. Maryland State Planning Department 1968 The Counties of Maryland and Baltimore City, Their Origin, Growth, and Development 1634-1967. Maryland State Planning Department, Baltimore, Maryland.
8. Maryland State Planning Commission, Committee on Medical Care 1962 Community Health Service Analyses. Maryland State Planning Commission, Baltimore, Maryland.
9. Maryland State Department of Health 1968 Protecting Maryland's waters. Maryland's Health, 40:4, No. 4. Maryland State Department of Health, Baltimore, Maryland.
10. Maryland State Department of Health 1969 Public Information News Release. Maryland State Department of Health, Baltimore, Maryland. (Mimeographed.)
11. United States Department of Commerce 1960 Characteristics of the Population, United States Summary. vol. 1, part 1, p. S64. United States Department of Commerce, Washington, D.C.
12. Gordon, J. 1968 Public Health and the Conquest of Disease in Baltimore, Maryland. Health Information, Baltimore City Health Department, Baltimore, Maryland. (Mimeographed.)

13. Maryland State Department of Health 1967 Employees Handbook. Maryland State Department of Health, Baltimore, Maryland.
14. Maryland State Department of Health 1967 Functional Organization. Maryland State Department of Health, Baltimore, Maryland.
15. Personal interview with C. Forbes, Chief, Division of Nutrition, Maryland State Department of Health, May, 1969.
16. Personal interview with E. Snyder, Chief of Nutrition, Baltimore City Health Department, April, 1969.
17. Personal interview with C. Loomis, Nutrition Consultant, Maryland State Department of Health, April, 1969.
18. Personal interview with N. Rhyne, Nutrition Consultant, Baltimore City Health Department, April, 1969.
19. Division of Nutrition 1968 Interagency Committee Focuses on Maryland Nutrition Concerns. Maryland State Department of Health, Baltimore, Maryland. (Mimeographed.)
20. Division of Nutrition 1968 Highlights for Annual Report. Maryland State Department of Health, Baltimore, Maryland. (Mimeographed.)
21. Division of Maternal and Child Health 1968 State Public Health Plan, Chapter 11. Maryland State Department of Health, Baltimore, Maryland.
22. White, B. D., and E. J. Beattie 1966 Day care for the mentally retarded as a part of local health services in Maryland. Amer. J. Public Health, 56:1883.
23. Personal interview with E. Walker, Nutrition Consultant, Maryland State Department of Health, April, 1969.
24. Maryland State Legislature 1965 House Bill No. 895. Annapolis, Maryland.
25. Personal interview with Dr. J. M. Krager, Director, Bureau of Health Supervision, Baltimore County Health Department, May, 1969.
26. Personal interview with A. Carter, Supervisory Nurse, Baltimore County Health Department, April, 1969.
27. Personal interview with E. McCarl, Director of Nutrition, Baltimore County Health Department, May, 1969.

28. Crippled Children's Services 1968 State Public Health Plan. Maryland State Department of Health, Baltimore, Maryland.
29. Personal interview with Dr. E. Schoenrich, Bureau of Chronic Diseases, Maryland State Department of Health, May, 1969.
30. National Communicable Disease Center, United States Department of Health, Education, and Welfare 1969 Morbidity and Mortality, vol. 18, No. 10. Public Health Service, Atlanta, Georgia.
31. Baltimore City Health Department 1967 Annual Report. Baltimore City Health Department, Baltimore, Maryland.
32. Maryland State Department of Health 1968 Annual Report Issue. Maryland's Health, 40:4, No. 1. Maryland State Department of Health, Baltimore, Maryland.
33. Bureau of Tuberculosis, Diet Manual, Maryland Tuberculosis Hospitals. Maryland State Department of Health, Baltimore, Maryland.
34. Maryland State Department of Health 1968 Maryland Medical Assistance Program--Programs and Potential. Maryland's Health, 40:6, No. 2. Maryland State Department of Health, Baltimore, Maryland.
35. Personal interview with C. Roddy, Consultant Dietitian, Maryland State Department of Health, May, 1969.
36. Personal interview with L. Mussendon, Chief Nutritionist, Maternity and Infant Care Project, Baltimore, Maryland. April, 1969.
37. Baltimore City Health Department 1966 Baltimore Health News, 43, Nos. 8-9. Baltimore City Health Department, Baltimore, Maryland.
38. Personal interview with N. Maiden, Chief Nutritionist, Children and Youth Project 606 A, Baltimore, Maryland, April, 1969.
39. Schaffer, Dr. A. J. 1968 The Nutritional Status of Children and Youth Center Children. Baltimore City Health Department, Baltimore, Maryland. (Mimeographed.)
40. Baltimore City Health Department, 1969 Baltimore Health News, 46: 66, Nos. 3-4. Baltimore City Health Department, Baltimore, Maryland.
41. Personal interview with P. Scheller, Coordinator of Meals-on-Wheels, Inc., Baltimore, Maryland, April, 1969.

VITA

Kay Hudson Beavo was born in 1944 in Corinth, Mississippi. She attended elementary and junior high school in her home town, Biggersville, Mississippi, after which she attended high school in Corinth. She received her Bachelor of Science Degree in Foods and Nutrition from Mississippi State College for Women, Columbus, Mississippi. During her senior year she was honored by being selected as a member of "Who's Who in American Universities and Colleges." In 1967 she completed the requirements for membership in the American Dietetic Association by serving a Dietetic Internship at Vanderbilt University Hospital, Nashville, Tennessee. After graduation she worked as a therapeutic dietitian at Baptist Hospital in Nashville. She became a resident in nutrition with the Nutrition Division, Tennessee Department of Public Health prior to entering the University of Tennessee for graduate study. After graduation she will return to Nashville, Tennessee, to assume a nutrition position in the Davidson County Metropolitan Health Department. She was married to Joseph Anders Beavo, Jr., May 31, 1968.