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To the Graduate Council:

I am submitting a thesis written by Joanne Riggins Mounger entitled "Observations and Experiences With the Nutrition Services, Jefferson County Department of Health, Birmingham, Alabama." 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:

Mary Row Gram

Cyrus Mayhark

Accepted for the Council:

Vice Chancellor for
Graduate Studies and Research

OBSERVATIONS AND EXPERIENCES WITH THE NUTRITION SERVICES,JEFFERSON
COUNTY DEPARTMENT OF HEALTH,BIRMINGHAM, ALABAMA

A Thesis
Presented to
the Graduate Council of
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In Partial Fulfillment
of the Requirements for the Degree
Master of Science

by
Joanne Riggins Mounger

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J. R. M.

ABSTRACT

The writer spent eight weeks with the Jefferson County Department of Health, Birmingham, Alabama for field experience in public health nutrition. This report is based upon the observations and experiences of the writer during this period of time.

The purpose of the field experience was to supplement the academic program with practical experiences. The field experience helped the writer better understand the functions of an official health agency and the role of a public health nutritionist within the agency. The writer observed and participated in the nutrition program within the health department as well as with community agencies and professional groups. Her special nutrition project was a survey of the food purchasing practices of the food stamp participants in Jefferson County.

The field experience provided the writer with a broader understanding of the responsibilities and functions of the public health nutritionist in the total health program. The study of a particular population and its needs; of an official health agency and its programs; and of various community programs and activities served to strengthen the writer's knowledge and awareness as to her future role as a public health nutritionist.

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CHAPTER I

INTRODUCTION

The main purpose of field experience in public health nutrition is to help the writer strengthen her philosophy and understanding of public health principles. Through actual observations and experiences in a field agency, the field experience supplements the academic course of study. The writer is provided with the opportunity to study a specific field agency as it applies public health principles to meet the health needs of the community. During this period, she broadens her understanding of the role of nutrition as related to programs within the agency and community. She is encouraged to apply her knowledge and abilities in planning, developing, and completing a variety of activities. Through participation in nutrition experiences, the writer is better able to identify her strong and weak areas and to evaluate her performance. In other words, the field experience provides a realistic setting that enables the writer to better understand the role of a nutritionist within an agency and the ways whereby she may best fulfill that role.

Field experience was provided for the writer by the Jefferson County Department of Health, Birmingham, Alabama. Objectives set by the writer were:

1. To become familiar with the community and its public health problems.

2. To become acquainted with the organization and general programs of the Jefferson County Department of Health and its relationship to the Alabama Department of Health.

3. To gain a more complete understanding of the role of the nutritionist within an agency.

4. To observe and participate in the nutrition services of the field agency.

5. To evaluate her abilities as a future practitioner of public health nutrition.

This thesis will present the observations and experiences of the writer with the Nutrition Services of the Jefferson County Department of Health and the Alabama Department of Health. The factors that determine the policies and programs of the Jefferson County Department of Health will be described in Chapter II. Chapter III will present the general program of the Alabama Department of Health and its specific relationship with the local agency. The experiences and performance of the writer in special activities will be discussed and evaluated in Chapter IV. Chapter V will summarize and evaluate the complete field experience.

CHAPTER II

FACTORS DETERMINING THE POLICIES AND PROGRAMS OF THE HEALTH DEPARTMENT

Since demographic characteristics and population needs greatly influence the programs and services provided by the health department, a thorough understanding of these factors is required. Furthermore, the study of vital records is important in discovering strengths and weaknesses of present health programs; in defining present health problems; and in planning for future health needs.

I. CHARACTERISTICS AND NEEDS OF THE POPULATION

Area Characteristics

Jefferson County, which is situated in the north central region of Alabama, covers an area of 1,124 square miles. The county is located in the center of a rich mineral region and the principle industries are the mining of coal and iron ore and the manufacturing of steel, iron, and their products. The county, excluding Birmingham, includes four cities with populations over 10,000 (Bessemer, Fairfield, Mountain Brook, and Homewood) and four cities with populations between 5,000 and 10,000 (Hueytown, Leeds, Tarrent, and Gardendale). Birmingham, which is often called "steel city", has over 350,000 residents. It is the central city and medical center of Jefferson County (1). The University of Alabama Hospital and Outpatient Clinics, the University of Alabama

Medical and Dental Colleges, the Veterans Administration Hospital, the Crippled Children's Clinic, the Eye Clinic, and the Children's Hospital are the principal medical facilities included in the center.

Population Composition

The present population of Jefferson County is close to 690,000 with less than 1 per cent being foreign-born and 33 per cent being non-white (1). Figure 1 illustrates the color and age characteristics of the population. In all age groups, the population is composed of more whites than non-whites. The largest percentage of the total population is located in the age interval of five through nine years (12.3 per cent). Other intervals in descending order of the percentage of total population sizes are: ages ten through fourteen years (11.7 per cent); birth through four years (11.7 per cent); fifteen through nineteen years (9.1 per cent); and sixty-five years and over (8.6 per cent).

In comparing urban and rural populations, about 83 per cent of the total population live in the urban areas (1). The population density of the metropolitan area and the large percentage of population nineteen years of age or under, 44.8 per cent, are outstanding factors that must be considered in planning for the needs of the community residents.

Socio-Economic Status

Approximately 160,000 families live in Jefferson County. Of this total number, 12,000 families, or 8 per cent, receive an income of less than \$1,000 per year and 2,000 families, or 1 per cent, earn \$25,000 or

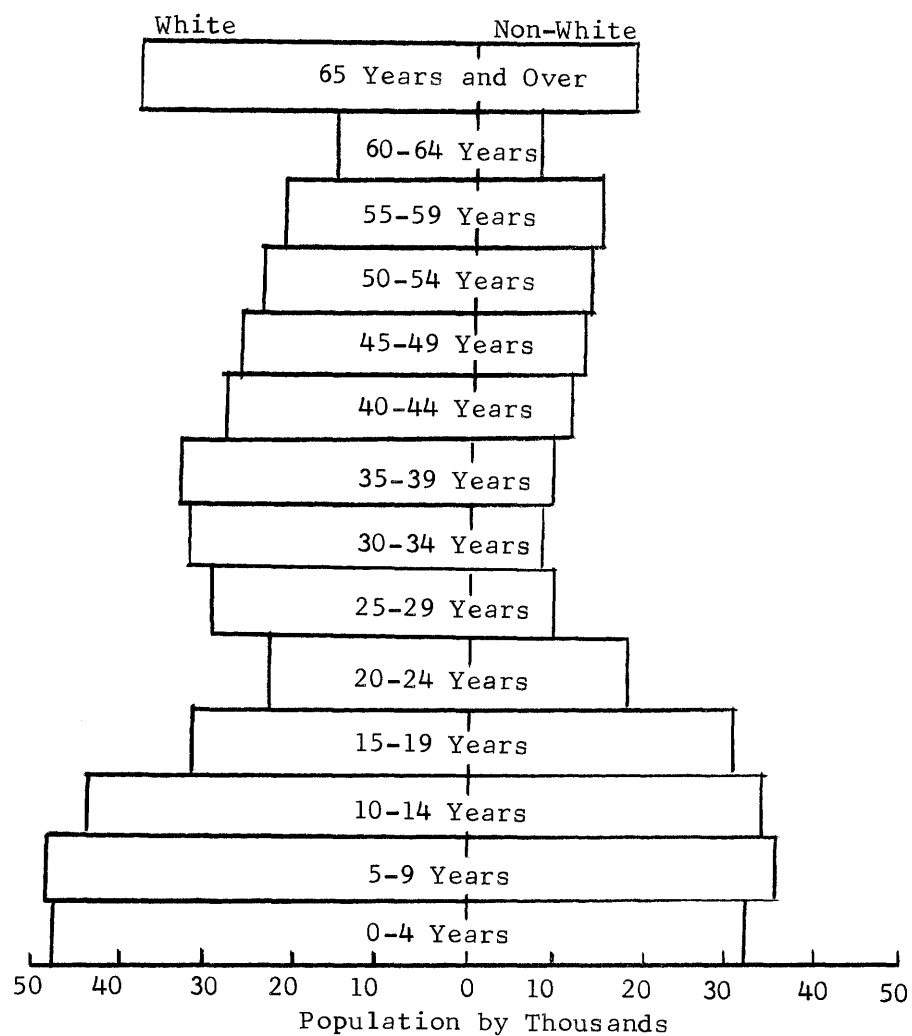


Figure 1. Comparison of the estimated population of Jefferson County, Alabama, by age and color, 1966.

more per year. The median income for families is \$5,103, and the median school years completed is 10.2. Less than 2 per cent of the workers employed in Jefferson County are engaged in agricultural jobs (2). Economic deprivation and a lack of formal education are both problems in Jefferson County which influence the nature of the health program.

Birmingham faces many problems that are common to all large and older cities. For example, the industrial and commercial establishments present problems in the county. Many industries are operating without adequate regulation; therefore, heavy amounts of air pollution are produced. Other examples are physical deterioration of older neighborhoods and inadequacy of available housing and facilities.

Vital and Health Statistics

In 1966, a total of 10,578 resident live births were recorded in Jefferson County. This was the ninth consecutive year that the number of live births declined. This decrease can be attributed largely to the planned parenthood program existing in the county. In 1966, the birth rate was 15.5 per 1,000 population, as compared to 18.5 per 1,000 population for the United States as a whole (1, 3).

The problem of illegitimacy is of great concern. In 1966, 1,675 delivers were to unmarried mothers. The non-white illegitimate rate of 324.4 per 1,000 delivers was almost twelve times higher than the white rate of 27.5 per 1,000 deliveries. Of the total illegitimate live births, 49.6 per cent were to mothers who were nineteen years of age or under, and 26.7 per cent were to mothers who were twenty to twenty-four years of age (1).

Low birth weight is of particular importance because of its relation to neonatal mortality. Of the 10,578 live births recorded in Jefferson County in 1966, approximately 10 per cent were premature (birth weights of 2,500 grams or less). The percentage of low birth weights was almost twice as great for the non-white population as for white persons (1).

The infant mortality rate for the United States in 1966 was 23.7 per 1,000 live births. The neonatal death rate (under twenty-eight days) was 17.2 per 1,000 live births, and the later infancy death rate (twenty-eight days to eleven months) was 6.5 per 1,000 live births (4). The infant mortality rate in Jefferson County for the same year was 23.4 per 1,000 live births which was the lowest it had been for the past sixteen years. The neonatal death rate (16.3 per 1,000 live births) was lower than the United States rate, but the later infancy death rate (7.1 per 1,000 live births) was higher (1). Figure 2 illustrates that the most important single factor in the decreased infant mortality rate in Jefferson County was the decrease of white neonatal deaths. It further shows that while the non-white rate for neonatal deaths (20.2 per 1,000) was significantly higher than the white rate (13.7 per 1,000), the non-white later infancy death rate (10.6 per 1,000) was even greater as compared to the white rate (4.8 per 1,000).

The maternal mortality rate for Jefferson County in 1966 was 4.7 per 10,000 live births. Five resident deaths associated with pregnancy and childbirth occurred which account for this rate. Two maternal deaths were white and three were non-white (1).

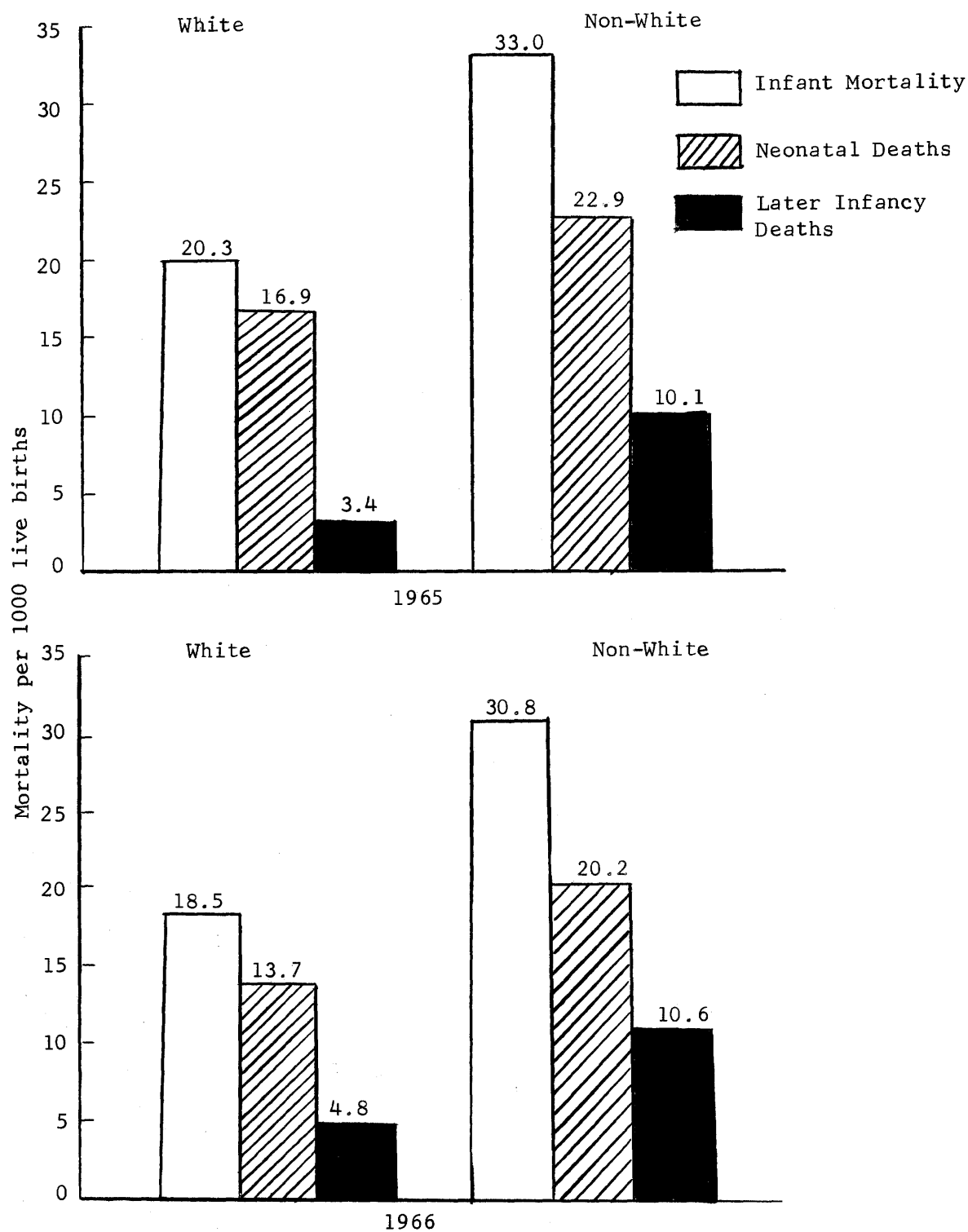


Figure 2. Comparison of infant mortality rates (neonatal and later infancy deaths) by color, Jefferson County, Alabama, 1965-1966.

Even though much progress has been made in supplying medical care to the indigent and young maternal population in Jefferson County, services still need to be improved and expanded. Many of these indicated problems can be reduced even more through comprehensive health programs for the indigent population.

The ten leading causes of death in Jefferson County as compared to those of the United States are shown in Table 1. The first six causes of death in Jefferson County are the same as for those of the United States. Other bronchopulmonic diseases, which rank seventh in Jefferson County, are tenth for the United States. Diabetes mellitus ranks eighth for both Jefferson County and the United States. General arteriosclerosis and other diseases of the circulatory system, seventh and ninth for the United States, are ninth and tenth, respectively, in leading causes for Jefferson County. Deaths from vascular lesions of the central nervous system and other bronchopulmonic diseases are approximately one and one-fourth times as great for Jefferson County as for the United States.

Although not listed among the leading causes of death, tuberculosis and venereal diseases are still major health problems in Jefferson County. Jefferson County is among those metropolitan areas in the nation with the highest reported rates of these diseases. However, an interview with the health officer indicated the fact that this high disease rate may be due to good case reporting in Jefferson County (6).

Tuberculosis is one of the oldest of all health problems in Jefferson County. In 1965 the new active case rate for Jefferson County

TABLE 1

LEADING CAUSES OF DEATH IN JEFFERSON COUNTY, ALABAMA AS COMPARED
TO THOSE OF THE UNITED STATES AS A WHOLE FOR 1966 (4, 5)

Leading Causes of Death (Per 100,000 Population)	Jefferson County		United States	
	Rank	Rate	Rank	Rate
Diseases of the Heart	1	278.0	1	371.2
Cancer	2	139.7	2	155.1
Vascular Lesions affecting the Central Nervous System	3	123.0	3	104.6
Accidents	4	44.4	4	58.0
Influenza and Pneumonia (except pneumonia of new born)	5	21.0	5	32.5
Certain Disease of Early Infancy	6	20.5	6	26.4
Other Bronchopulmonic Diseases	7	19.8	10	14.5
Diabetes Mellitus	8	19.6	8	17.7
General Arteriosclerosis	9	14.5	7	19.9
Other Diseases of the Circulatory System	10	14.4	9	14.6

(44.0 per 100,000 population) was almost twice as great as that for the United States (25.3 per 100,000 population) (7). When compared with counties which include a principal city of 250,000 population, Jefferson County ranked number one in new active tuberculosis cases in 1965 (7). Data for the principal city of Birmingham was not available separately.

The venereal diseases of syphilis and gonorrhea are definite problems. The rate of primary and secondary syphilis reported in the city of Birmingham has risen from 44.5 per 100,000 population in 1964 to 76.4 per 100,000 population in 1966. During the calendar year of 1966, Birmingham had the highest rate of primary and secondary syphilis reported in the United States (8).

II. PROGRAMS OF THE HEALTH DEPARTMENT

The history, organization, and activities of the health department reflect problems that have confronted the community. Health programs are planned and conducted to meet present and future needs of the population in Jefferson County.

History of the Health Department

The agency known today as the Jefferson County Department of Health was officially established in 1917. At that time Birmingham was known as one of the "unhealthiest cities in the nation" (5).

In 1916 the Public Health Service was asked to review the health problems of the area. Although city and county health units existed, health services were inadequate due to lack of organization of the units.

At that time the population of Jefferson County was approximately 300,000 with the majority living in the City of Birmingham (9).

Dr. Carrol Fox of the Public Health Service reviewed the program and problems in the community and revealed the following information. The low number of deaths recorded indicated that deaths were not being reported to the authorities. Even though infectious diseases such as typhoid, malaria, tuberculosis, smallpox, diptheria, and scarlet fever were reported in large numbers, Dr. Fox felt these reports were incomplete. He noted that the nutritional disease, pellagra, was occurring extensively throughout the county. The existing health units, one in the county and the other in the City of Birmingham, were poorly organized, inadequately staffed, and ineffectively meeting health needs of the community (9).

As a result of his study of the community, Dr. Fox submitted an extensive list of suggestions. The main recommendations follow.

That a physician with special training in Preventive Medicine be employed in the dual capacity of full-time City-County Health Officer and that he be provided with two full-time Assistant Physicians, one for the City of Birmingham and the other for the County, including all municipalities outside of the City of Birmingham.

It was further recommended that this Department be divided into two sub-departments, one for the City, and the other for the remainder of the County.

That a full-time Sanitary Engineer be employed. That the inspection staff of both the County and City units be increased and that a total of 17 nurses be employed for the two Units. The remainder of the recommendations dealt with specifics for the control of the environment, the control of infectious diseases, and provision of infant care services (9).

Many of the recommendations were followed, and more adequate health services were provided for the population. In 1917, a full-time health officer was employed and the two divisions were consolidated to create the agency presently known as the Jefferson County Department of Health. Since the beginning of the health department, many problems have been encountered but much progress has been made over the past fifty years.

Organization

The County Board of Health working through the Jefferson County Department of Health is responsible for promoting and protecting the health of the citizens. The County Board of Health is by law the Board of Censors of the Jefferson County Medical Society (10). This board is composed of five physicians, who are elected by the County Medical Society, and the President of the County Commission, who by reason of his office is a member. Although the Alabama Department of Health (discussed in a later section) is considered the parent organization, the local board of health is the governing body. All policies and programs for the health department must be submitted to the monthly board meeting for approval.

The County Health Officer is elected by the County Board of Health with the approval of the State Committee of Public Health (10). The board may specify the term of office with three years being the minimum time. The County Health Officer then serves as health officer for all municipalities within this county (10).

The Jefferson County Department of Health is a unit composed of eight bureaus, and each bureau is organized and staffed to conduct certain phases of the program. The Bureaus are Administration, Records and Statistics, Communicable Diseases, Dental Health, Mental Health, Health Education, Sanitation, and Public Health Nursing (see Figure 3). The director of each bureau is directly responsible to the health officer or deputy health officer.

Five health centers and two sub-health centers are located throughout Jefferson County in areas where the greatest needs for medical care have been identified (Figure 4). Although the health centers are officially under the direction of the health officer, the Bureau of Public Health Nursing is directly responsible for the management and operation of the centers. The five health centers are Eastern, Northern, Southern, Western, and Bessemer. Bessemer differs from the other four centers in that it is a district office of the health department. The Bessemer District Office serves approximately 100,000 people in this area in the same manner that the main health department in Birmingham serves the remaining population of Jefferson County. The program of the health center in the Bessemer District Office is similar to those of the other health centers. The two sub-health centers are located in Morris and Tarrant. Since the sub-health centers do not have a permanent staff as do the health centers, they are serviced by the nurses from the health centers. In all centers, the public health nurses work closely with physicians, nutritionists, and other members of the health team to provide

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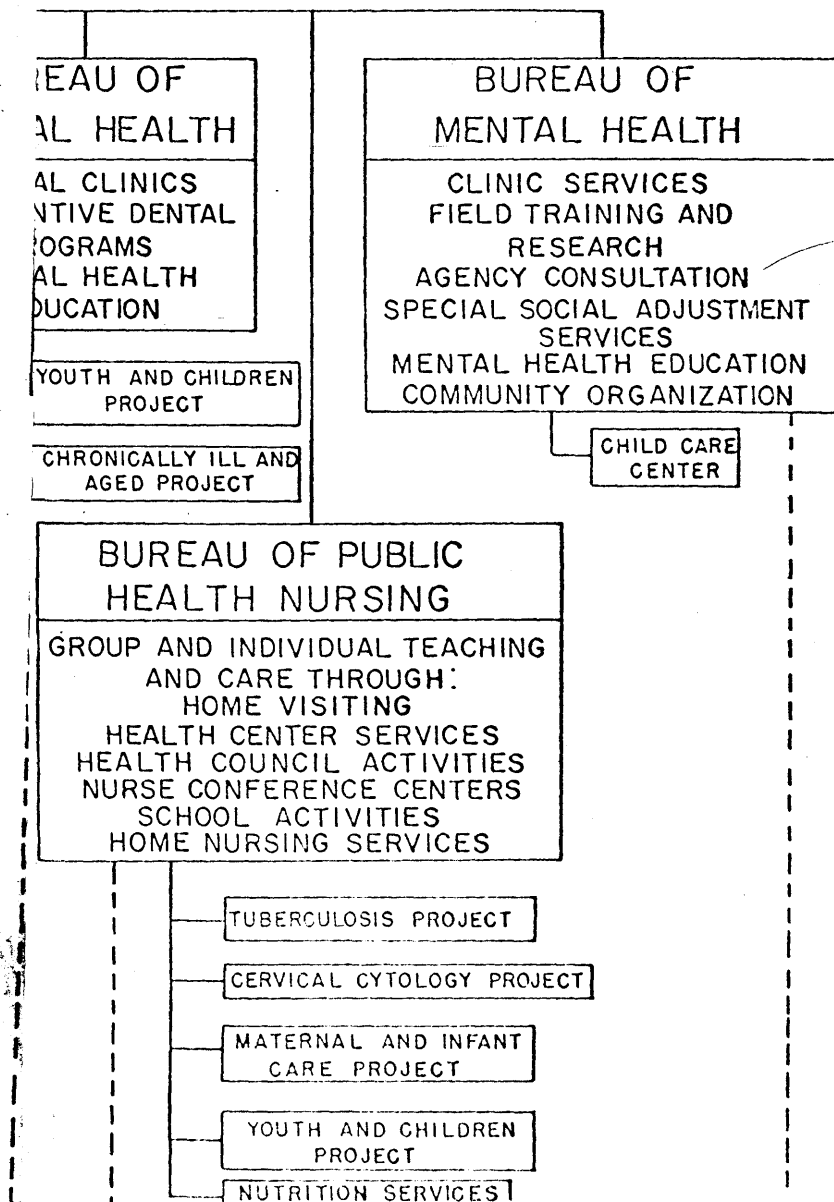
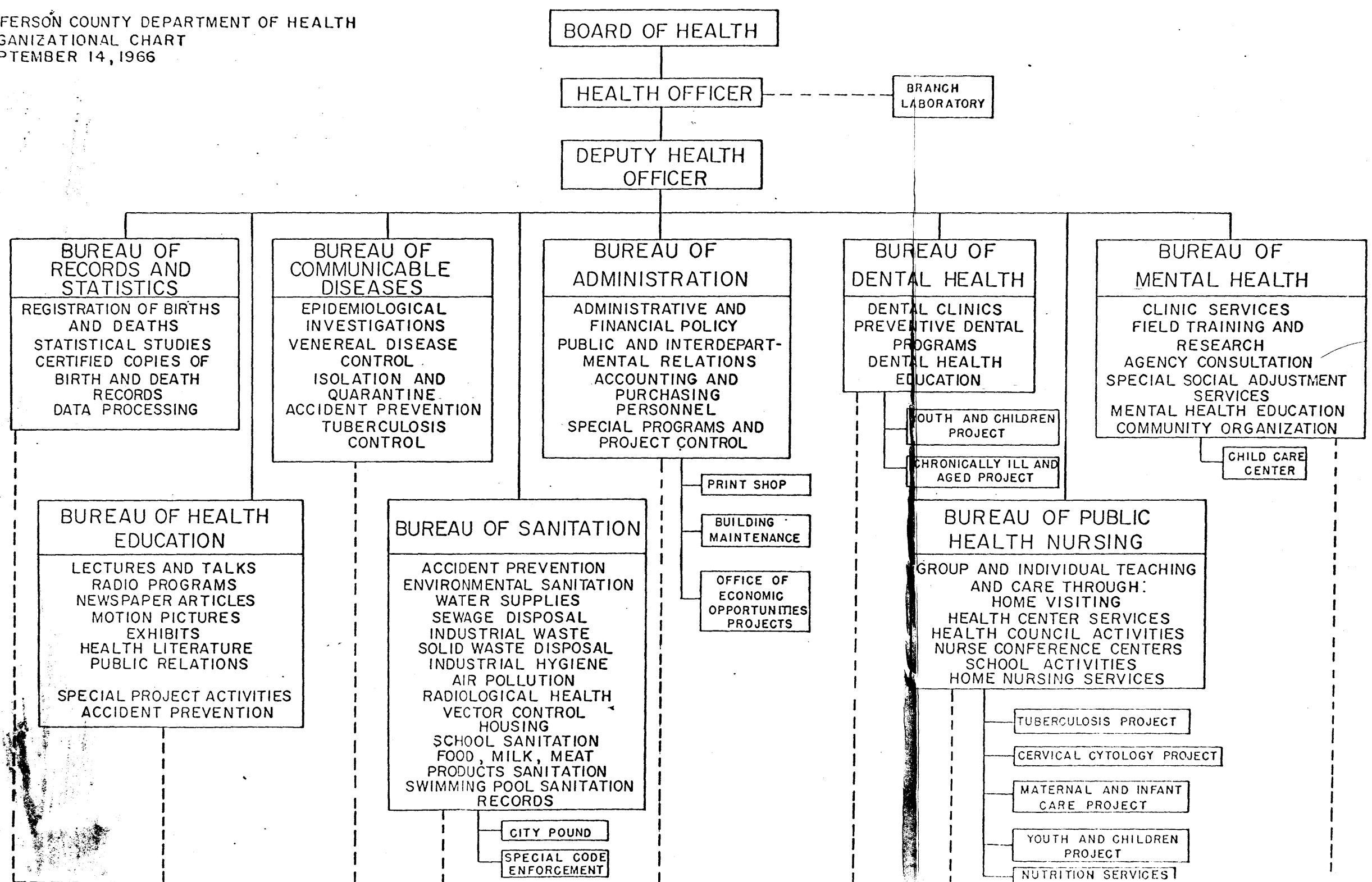


Figure 3. Organizational chart of the Jefferson County Department of Health, Alabama, 1966.



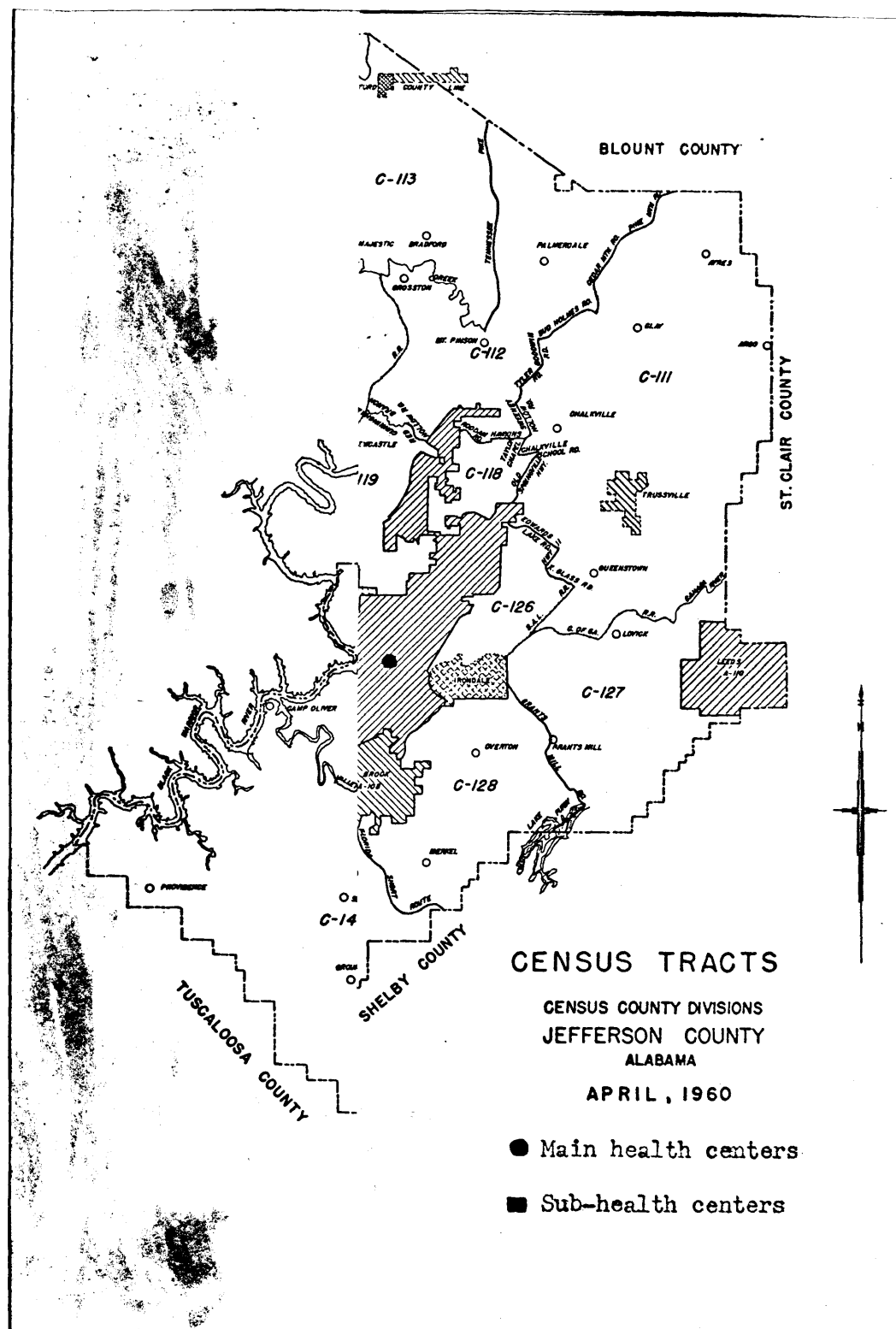
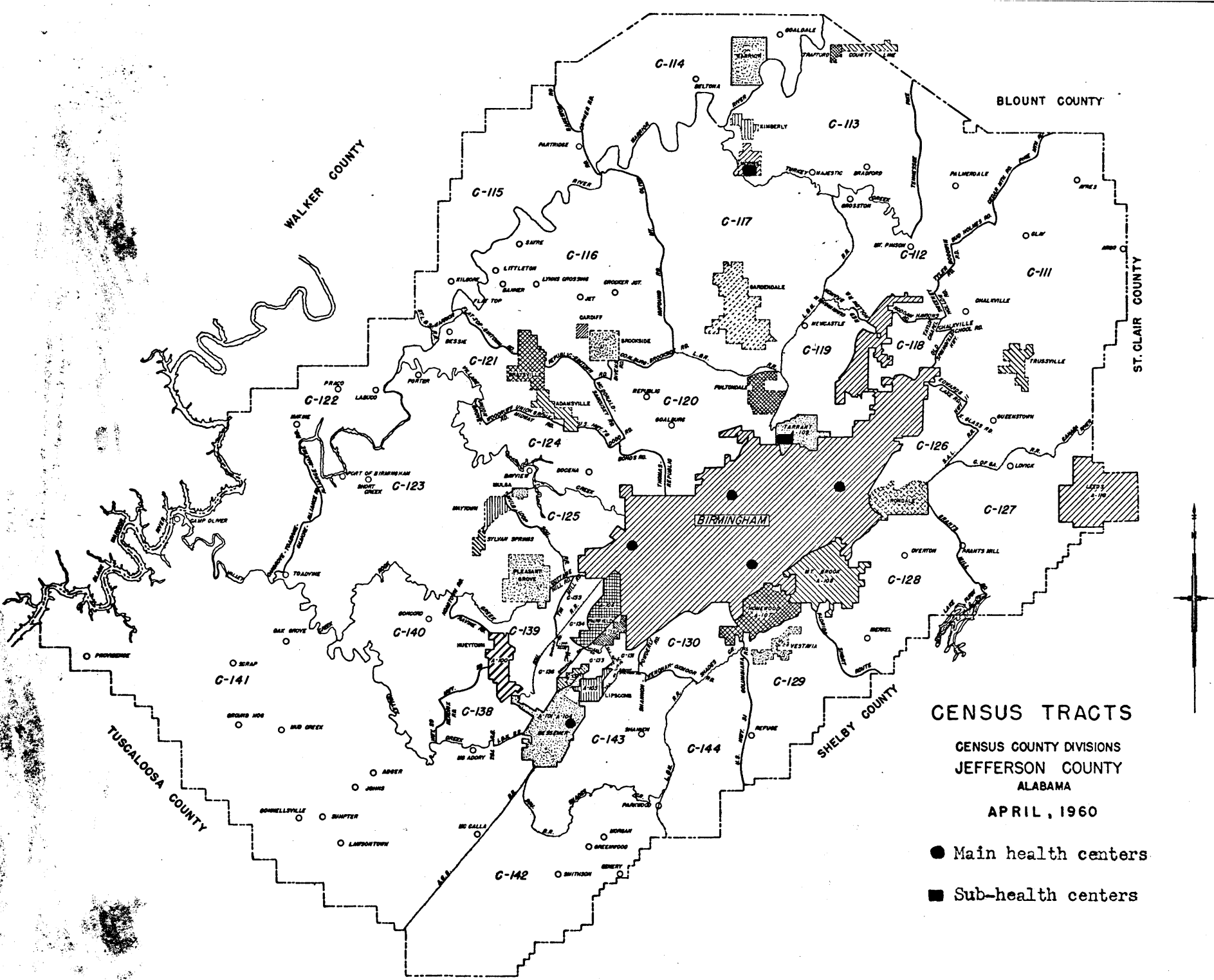


Figure 4. Five main health centers and two sub-health centers in Jefferson County, Alabama, 1966.



CENSUS TRACTS
CENSUS COUNTY DIVISIONS
JEFFERSON COUNTY
ALABAMA
APRIL, 1960
● Main health centers
■ Sub-health centers

medical services necessary in meeting the many and varied needs of the community.

General health services are provided through clinics for maternal health, child health, tuberculosis, and venereal disease. Although family planning clinics are held in one health center, plans are being made to expand this service to at least two other health centers. Additional services should help in combating the problem of illegitimacy in Jefferson County. At the present time, mental health clinics are conducted only in the health center located in the central office of the health department.

Bureau of Administration

The main functions of the Bureau of Administration are the formulation of broad executive and administrative policies, public relations, inter-departmental relations, the determination of financial matters, accounting, purchasing, and special programs and projects (10). One of the main concerns at the present time is the reorganization of the health department. The organizational structure as it now exists and has existed for several years needs to be evaluated and expanded to meet changing trends (6).

Funds for the Jefferson County Department of Health are obtained from three sources. Appropriations are made by the Federal Government, the State of Alabama, and Jefferson County and its municipalities. The total annual budget for the fiscal year 1965 to 1966 was \$2,567,602.92 (5).

Bureau of Statistics and Vital Records

The Bureau of Statistics and Vital Records, which was known as the Bureau of Records and Statistics until March, 1967, is an essential unit of the Jefferson County Department of Health since community planning is based upon the statistics provided by this bureau. The bureau is organized into three functioning sections. These are the registration and Certification Section, Statistical Section, and Data Processing Section (11).

Data Processing Section with its modern computer program is operated primarily as a service division for all bureaus under the supervision of the statistical services of the Bureau of Statistics and Vital Records. Some examples of the data that are processed for the different bureaus are: payroll for the Bureau of Administration; the air pollution study data for the Bureau of Sanitation; dental clinic activities and dental health supply inventory for the Bureau of Dental Health; and the information included in the tuberculosis registry, daily nursing activities, and the Medicare file for the Bureau of Public Health Nursing. Data which are compiled from these projects help the bureau directors gauge the health needs of the community and organize the necessary health services.

The bureau keeps complete and detailed records of diseases, births, and deaths for Jefferson County and prepares statistical reports of a general nature and of results of special studies. The work of this bureau is of fundamental importance in meeting the health needs of the community.

The statistical analyses of records supplies the health officer with information which enables him to: determine the strengths and weaknesses of the health program; become aware of present health needs and anticipate developing health problems; plan for future health needs; and provide services where the need is greatest (10).

Bureau of Communicable Diseases

The two major programs of the Bureau of Communicable Diseases are accident prevention and venereal disease control. However, the bureau is also responsible for the control of other contagious diseases such as typhoid, diphtheria, meningococcal infections, and tuberculosis. While the Bureau of Communicable Diseases has a part in tuberculosis control, the Bureau of Public Health Nursing has the major responsibility. The two bureaus work closely in this particular program.

Since accidents are the fourth leading cause of death in Jefferson County, much emphasis is being placed on the Accident Prevention Program. A principal part of the Accident Prevention Program is individual safety instructions by members of the Bureau of Communicable Diseases. During 1965 and 1966, 3,538 individuals were taught safety rules (5). Other functions of the program are observation and elimination of hazards by members of the staff.

Since Birmingham has a high rate of primary and secondary syphilis, special attention is given to the control of venereal diseases. The purpose of the Venereal Disease Control Program is to protect the individual as well as the public. Trained investigators visit infected

persons to detect the original source of infection; to discover other possible cases; and to prevent the spread of the disease. In the future, the Bureau of Communicable Diseases hopes to further improve the Venereal Disease Control Program by obtaining more trained interviewers and investigators, opening night clinics for the convenience of patients, and establishing better cooperation between private physicians and the health department.

Bureau of Dental Health

The main purpose of the Bureau of Dental Health is to improve the dental health of people living in Jefferson County. The activities are classified into three major categories: dental disease prevention, dental treatment programs, and dental health education. In different ways the entire population of Jefferson County benefits from the activities of the Bureau of Dental Health. Although clinical services are limited mainly to individuals in the lower income levels, educational activities are available to all, and preventive measures are available to many.

Many preventive programs are being conducted in Jefferson County. First of all, fluoride treatments are provided for thousands of children each year in attempts to reduce tooth decay. Since much more improvement in dental health would be possible through fluoridation of the community water supplies, the Bureau of Dental Health has recommended for several years that this improvement be made. Secondly, the members of the staff are encouraging private dentists to use a relatively new and simple oral smear technique for early detection of mouth cancers. Another preventive

measure is the mouthguard. Mouthguards are provided by the staff and Birmingham District Dental Society to the football players attending schools in Jefferson County.

The dental treatment program is limited to children who are eligible for the KU Number 622 Children and Youth Program, hereafter referred to as KUCY Program, and to chronically ill and aged persons with low incomes. KUCY Program is a grant provided by the Children's Bureau. The grant provides health services to children in low-income families from birth through eighteen years of age. In Jefferson County, more than 61,000 children are eligible for this program (12). The clinical facilities of the Bureau of Dental Health include: three modern dental trailer units, dental clinics at five health centers, and portable dental equipment, which is used in treating home-bound or institutionalized patients.

A basic aim of the bureau is dental health education. All staff members participate in community activities and in consultation services. A Dental Health Educator works with the teachers in the Jefferson County schools in developing teaching units in dental health. She also provides dental health information to the school lunch workers and occasionally works with the nutritionist concerning the nutrition component (13).

Bureau of Mental Health

The primary purpose of the Bureau of Mental Health is to promote good mental health and to prevent mental illness in the community. The principal functions in serving the community are to provide direct

out-patient psychiatric services; consultation to agencies, professional persons, and individuals; and public education. The team of psychiatrists, psychologists, social workers, child workers, and nurses provide comprehensive diagnostic and treatment services (14).

The program areas in which the nutritionist provides consultation or service are the Children's Center and the Drug Clinic (15). The Children's Center, which has been in operation for two years, provides a therapeutic kindergarten-type setting for emotionally disturbed pre-school children. The Drug Clinic serves the indigent patients who have been discharged from the hospital. These patients receive free psychiatric supervision and drugs. The nutritionist frequently provides diet instructions for these patients.

Bureau of Health Education

The primary functions of the Bureau of Health Education are included in three areas: program planning and evaluation, organization and promotion of health education activities, and extension of health education through communication media. The director and six health educators in the Bureau of Health Education support the programs of other bureaus in the health department. Through cooperative program planning with the other bureaus, many health needs of the community are provided.

While the Bureau of Health Education is involved in a large number of outstanding programs and projects, only a few of the most recent ones will be mentioned. The number of accidents occurring among preschool children in Jefferson County is high; therefore, special

emphasis is being given to this particular area. Examples of programs which have been conducted are: accident prevention programs, Burn Injury Control Project, and Home Safety Program Inventory. As a result of planning with faculty members of the University of Alabama, the Bureau of Health Education is responsible for developing health education instructional material and visual aids for the teachers in Operation Headstart in Alabama and neighboring states.

Slides, charts, booklets, and news releases are developed, and Health Focus, the newsletter of the Jefferson County Public Health Workers, is edited and published by the Bureau of Health Education. A recently completed film series of food sanitation classes is now available.

Bureau of Sanitation

The activities of the Bureau of Sanitation are interrelated with other program areas in carrying out many of their functions and responsibilities. The success of several programs depends on cooperation with other bureaus within the health department. As mentioned earlier, many of the problems in Jefferson County are ones related to sanitation, and the Bureau of Sanitation is endeavoring to provide solutions to these problems. In 1966, the National Samuel J. Crumrine Award was received by the Jefferson County Department of Health for outstanding achievement in the development of a comprehensive program in environmental health (5).

The main programs of the Bureau of Sanitation include a variety of activities: general sanitation, which includes vector and rabies control; milk products inspection; red meat sanitation; housing; engineering, which includes air pollution, radiological health, water supply, recreation facility sanitation, and sewage and liquid waste disposal; food control; and institutional sanitation. Services of the nutritionist are often required in the food control and institutional sanitation programs. Because housing and engineering have made many recent advancements in solving existing community health problems, the writer will discuss these programs.

In 1966, the Bureau of Sanitation engaged in the project grant program, "Operation Pride." The purpose of the project is to rehabilitate and stabilize areas in cities that are beginning to deteriorate. The project area covers 1,154 acres within 172 city blocks. The total cost of the project, \$1,754,000.00, is provided by the Federal Government and the city of Birmingham. Objectives are to stimulate neighborhood pride and to revitalize a community that is now standing still (5, 14).

The engineering section has been studying air pollution in Jefferson County for the past ten years. The results of all of these studies indicate that Jefferson County has excessive air pollution and that industrial activities are the main source of air pollution. Control of air pollution is the major objective of the Air Pollution Program. In striving to reduce the health problem of tuberculosis, the importance of control in Jefferson County seems evident; therefore, efforts are being made to secure legislation which would enforce air pollution control.

In several areas in the community, inadequate sanitary sewers and water services are problems which have existed for several years. Emphasis is being placed in a program to expand sanitary sewers into areas not previously served and to extend sewers into older areas to prevent the development of public health hazards. Communities that are located outside the area served by the Birmingham Water Works are not obtaining adequate water supplies in the homes. In order to eliminate this problem, the Bureau of Sanitation approved plans and specifications for three new water systems in 1966. Efforts are now being made to complete these systems.

Bureau of Public Health Nursing

The program of the Bureau of Public Health Nursing is considered to be a generalized one. However, the addition of many newer programs is causing a change in focus. These new programs and activities include: a Psychiatric Central Case Register; Home Health Service Program; Accident Prevention Program; and Child Centered Tuberculosis Testing Program. Furthermore, much emphasis is being placed on conducting various workshops to improve skills of health personnel. The main purpose in planning and developing each new program is to improve service to the community.

The Bureau of Public Health Nursing consists of 130 staff positions. Of this number, eighty-five are nursing positions. This number includes three administrative, five supervisory, and three assistant supervisory nurses with fifty-three nurses in the generalized program. Twenty-one

of these nurses are with special projects such as tuberculosis, mental retardation, and maternal and infant care. The remaining forty-five positions are occupied by nutritionists, X-ray technicians, nursing assistants, clerks, and custodial workers.

Although the Nutrition Service Division is included in the Bureau of Public Health Nursing, it will not be covered here. Nutrition Services will be discussed in depth in the following section.

The main programs and activities, which involve the public health nurses, are the following ones: immunization activities, tuberculosis program, maternal and child health, home health nursing service program, and mental health. In all services provided by the public health nurses, the main goal is to guide the individual and family toward better health.

In the health centers and special clinics set up throughout Jefferson County, immunizations are administered to children. Parents are encouraged to bring their children to the routine child health clinics for check-ups and immunizations. In 1966, the new immunization against measles was added to the program, and an intensive program was conducted in Jefferson County to immunize all preschool children against measles.

In the tuberculosis program, much progress is being made in case finding. The public health nurses provide regular supervision to those persons diagnosed as having tuberculosis. An important new phase, which was added to the program in 1966, is the Child Centered Tuberculosis Testing Program. This program involves a team of nurses going into the schools and skin testing all children in the first grade, their teachers,

and all new teachers. When positive skin tests are discovered, close follow-up care is provided to both child and family.

In striving to reduce maternal and infant mortality rates, the Children's Bureau is providing grant funds to care for mothers and infants with physical and financial problems. As part of her duties in this particular program, the public health nurse attempts to find cases who need this care and to get them under medical supervision. The public health nurses, physicians, social workers, and nutritionists work cooperatively to provide the best possible care for these patients in prenatal clinics and follow-up care clinics which are held at the University of Alabama Outpatient Clinic. Fees for clinic and hospital expenses are provided through the Maternal and Infant Care Project Grant. The five health centers and two sub-health centers of the health department provide out-patient care in prenatal clinics. In these clinics, however, services are provided only to the "normal" prenatal patients. Those women having serious complications are referred to the maternal complications clinic. After delivery their babies are followed in the high-risk infant clinic for one year. In the child health clinics held in the health centers, the public health nurses with physicians and nutritionists offer continuous care to infants and pre-school age children. Records regarding each child's growth and development, his illnesses, and immunizations are kept. When appropriate, the physicians examining the children make referrals to the Children's Hospital for follow-up care and treatment.

The Bureau of Public Health Nursing was approved for Home Health Service under the Health Insurance for the Aged Program, hereafter referred to as Medicare Program, in 1966. The public health nurse functions in this program by making home visits to elderly and chronically ill patients to provide health counseling and rehabilitative care. Furthermore, she provides bedside nursing care until other arrangements are made with family members or other agencies (5).

In coordination with the Bureau of Mental Health, the public health nurses provide services in follow-up clinics for mentally ill patients. The Bureau of Public Health Nursing is responsible for initiating a Psychiatric Central Case Register in 1966. Better service to patients and their families is possible through the use of this register.

The Bureau of Public Health Nursing is involved in numerous other programs such as planned parenthood clinics, cervical cytology project, comprehensive school health programs, and injury control. A relatively new approach being used in the Bureau of Public Health Nursing is team nursing. In daily conferences, a group of public health nurses evaluate problems and approach solutions as a group or team. Even though team nursing has been in operation only for a short time, it is already proving to be of value to the public health nurse (16).

III. NUTRITION SERVICES DIVISION

The Nutrition Services Division is located within the Bureau of Public Health Nursing. The division provides a generalized program

designed to meet nutrition problems and needs of the population in Jefferson County. The history, objectives, and organization of Nutrition Services influence the type services extended to programs within the health department, as well as to agencies within the community.

History

The nutrition unit in the Jefferson County Department of Health was established in 1958. At that time, one nutritionist was employed primarily to serve in the area of chronic disease. Her main responsibility in this program was to provide services to the nursing homes in Jefferson County. In 1965, the second nutritionist joined the staff. At that time, the nutrition program was gradually including services to the maternal and child health program in the Bureau of Public Health Nursing. In the fall of 1967, funds were provided through the Children's Bureau grant to employ a nutritionist for the Maternal and Infant Care Project, thus, increasing the staff to three nutritionists. Since the beginning of Nutrition Services, the program has gradually expanded to include a variety of services.

Objectives

In planning for present and future nutrition programs, objectives are established by the nutrition unit. The general objectives are (17):

1. To compile information regarding needs and services in nutrition as related to health department programs.
2. To provide nutrition services based on determined health needs.

3. To provide educational community field experience for dietetic interns and students.

4. To provide in-service education for the Bureau of Public Health Nursing staff and other health personnel.

5. To participate in community health activities.

Organization

Since Nutrition Services is located within the Bureau of Public Health Nursing, the chief nutritionist is directly responsible to the director of this bureau. However, activities and services are not confined to the program of this bureau. As the number of nutritionists increases, the nutrition services and programs within the health department, as well as within the community, are rapidly expanding. For these reasons, Nutrition Services is greatly in need of being placed directly under the supervision of the Health officer and at the same organizational level of the other bureaus.

The staff is composed of three nutritionists: the chief nutritionist and two staff nutritionists. One of the staff nutritionists is with the Maternal and Infant Care Project. The responsibilities of the staff members include meeting regularly to plan and evaluate nutrition activities. Furthermore, nutritionists attend special workshops, conferences, classes, and meetings to gain or review educational information necessary for professional advancement and growth. Each nutritionist is responsible for keeping statistical records of her services throughout the month. Each nutritionist keeps daily records

of her activities and uses this information in preparing her monthly narrative reports.

Generalized Nutrition Services

The chief nutritionist and staff nutritionist are largely responsible for the generalized nutrition services in Jefferson County and the nutritionist with the Maternal and Infant Care Project emphasizes services in the areas relating to maternal and infant health. The four areas, which are included in generalized nutrition services, are: maternal and child health, chronic disease, services in the Bureau of Public Health Nursing, and intradepartmental services.

Maternal and child health. Many services are included in this particular area but the major part of the nutritionist's time is spent in child health and prenatal clinics. Nutrition classes concerning the prenatal patient, infant, preschool child, and school age child are taught in all health centers. Individual counseling of patients is done when the need is indicated.

The nutritionists cooperate with the project nutritionist in providing nutrition services for the Maternal and Infant Care Project. The nutritionists function on a part-time basis primarily in the maternal health area of the project. Their responsibilities include obtaining nutrition histories from normal prenatal patients in the five neighborhood clinics and two sub-health center clinics. The nutritionists teach diet modifications to individual or groups of prenatal patients with

anemia, diabetes, excessive weight gain, or toxemia. Maternal and infant complications occur more frequently among early teenage mothers than among mature women; therefore, the study of the teenage prenatal patient is of particular interest to the nutritionists. The nutritionists keep records to show the percentage of infants born prematurely to mothers who are thirteen through nineteen years of age. The nutritionists further aid the project nutritionist in developing teaching materials.

The project nutritionist is responsible for determining the nature and extent of the nutrition needs and problems in the population being served. In staff meetings and case conferences, she participates with the project team in planning and evaluating services.

One of the main functions of the project nutritionist is to extend the services of the nutritionists by providing more nutrition education for prenatal and postnatal patients. In cooperation with the nutritionists of the health department, she coordinates the planning and nutrition instruction for all prenatal patients in the health clinics. In addition she is responsible for nutrition education in the high-risk infant clinics and clinics for prenatal patients with complications. In her interview with the patients, she obtains a nutrition history and provides the necessary nutrition instruction. The interviews are then summarized on the patients' records to aid in future counseling.

The project nutritionist is responsible for coordinating the services and teaching materials of the Jefferson County Department of Health, the University of Alabama Hospital, and the University of Alabama

Outpatient Clinics to promote continuity of nutrition education to the patients before, during, and after hospital delivery. She provides inservice education to the public health nurses in order to increase their abilities in giving good nutrition instruction. At the same time, she works closely with the outpatient clinic dietitian and hospital dietary staff in planning nutrition material so that the same basic teaching materials will be used by all.

Frequently, nutritionists are invited to participate in school lunch workshops. The nutritionist also provides services to the parochial school lunch programs. When parochial schools request the services of the nutritionist, she makes regular visits to the school and occasionally conducts workshops for the school lunch managers and employees.

Project Headstart receives attention from the nutritionists. The nutritionists are requested to teach classes to parents, teachers, and cooks associated with the Headstart centers.

Community organizations often request the services of a nutritionist. She gives talks to Parent-Teacher Associations on feeding children of various ages. Occasionally, church groups seek the help of a nutritionist in summer church programs. For example, one nutritionist taught nutrition classes to children during the summer.

Chronic disease. The area of chronic disease involves services for nursing homes, diabetic patients, and chronic dialysis team members. Visits are made to nursing homes to aid food service supervisors with

such problems as menu planning, modified diets, or kitchen planning. The nutritionist teaches classes for the employees whenever needs arise. For example, one nursing home frequently encountered problems in preparing modified diets; therefore, the nutritionist taught a series of classes on modified diets to the food service employees and nurses' aides. The nutritionists also prepare newsletters, which contain food service and nutrition information, for the nursing home personnel. A food service supervisors' group, organized by the nutritionists, meets once a month. At these meetings, the nutritionists present educational programs.

The Medicare Program has altered the amount of services provided by the nutritionist in the nursing homes. She still provides consultation to homes not employing a dietitian. However, she has helped to recruit qualified dietitians to serve in those homes desiring to employ a part-time dietitian or consultant.

Increasing attention is being given to the chronic disease, diabetes. The nutritionist is frequently requested to participate in classes for diabetics and to give individual diet instructions in health clinics or homes.

One nutritionist is a member of the chronic dialysis team, which is a part of the renal disease unit of the University of Alabama Hospital. The nutritionist participates in hospital evaluation conferences for these patients. After discharge from the hospital, the nutritionist reinforces dietary instructions for these patients in their homes.

Service in the Bureau of Public Health Nursing. Since the nutritionists are located in the Bureau of Public Health Nursing, many of the nutrition activities are related to the services and requests of the public health nurses. As previously mentioned, all nutritionists provide services in the child health and maternity clinics of the health department. Furthermore, two nutritionists give regular service to the other clinics held in the health centers. Examples are: tuberculosis, cytology, and drug clinics.

The nutritionist accompanies the public health nurse on home visits when the nurse feels inadequate in supplying the needed information to particular families. Many of the visits involve nutrition counseling with patients or family members concerning information on modified diets or food budgeting and purchasing.

Many other varied services are provided to the public health nurses. Some of the types of assistance include: providing nutrition orientation sessions to the public health nursing staff and students; participating in inservice classes, workshops, and television programs; and supplying visual aids and resource materials for use in clinics and home visits.

Intradepartmental services. Other bureaus in the health department frequently request a variety of services from the nutritionists. Some examples of services requested are: to serve as consultant on modified diets; to plan and participate in special interdisciplinary projects; and to develop nutrition materials.

Patients attending the drug clinic most often require low calorie diet instructions. The social case workers and nurses confer with the nutritionist in planning for the special needs of these patients.

Nutritionists often are asked to assist in planning and participating in special interdisciplinary projects. Recently, a group of health educators, nutritionists, and public health nurses planned a series of classes to be presented in one of the housing projects. Classes on meal planning and preparation are to be taught by the nutritionists. Another project planned and presented by health educators and nutritionists was a series of classes on sanitation and work simplification for food service employees.

Nutrition materials are developed by nutritionists for use in other programs. Examples of these materials are: slides and a script on diabetic diets; a food buying guide to be distributed to parents with children in juvenile court; and a meal plan guide and nutrition instruction leaflet to be used in child health clinics. At the present time, an infant feeding pamphlet is being prepared for use in all infant health clinics in Jefferson County.

Special Community Project Services

The nutrition staff actively participates in the activities of special community agencies and programs. These agencies and programs include the Community Service Council, the Diabetes Trust Fund, the Parent-Child Center Pilot Program, and the Visiting Nursing Association.

Community Service Council. Nutritionists work cooperatively with the Community Service Council in program planning. This council is a medium through which all forces in the community (private and public) may plan together for health, welfare, and recreation services. At the present time, the Community Service Council is applying for a project grant titled "Comprehensive Areawide Health Planning for Jefferson County Areas." The purpose of this grant is to coordinate medical planning and care in order to better meet the health needs of Jefferson County (18).

One recent program, planned cooperatively by Community Service Council, the Dairy Council, the Jefferson County Department of Health, the Jefferson County School Boards, and several other agencies was the "Workshop on Nutrition Education for Teachers." The nutrition staff spent much time in helping to plan the program for this workshop.

The Health Council of Birmingham and Jefferson County is a division of the Community Service Council. Nutritionists, along with representatives from the Department of Agriculture, hospital dietitians, home economists with the utility company, social workers in community organizational health, and the local dairy council, serve on the Nutrition Committee of the Health Council. Outstanding community programs are sponsored by this committee. One program was the "Good Food Management" series for low-income families. The purpose of these classes was to help families, who were food stamp recipients, to spend their food money more wisely. The series of classes were taught in six housing projects.

Another program, sponsored by the Nutrition Committee, was for day care center operators. Classes reviewing the principles of normal nutrition for children were taught, and demonstrations on meal planning were provided.

Diabetes Trust Fund. A diabetes teaching clinic sponsored by the Diabetes Trust Fund is to open soon in Jefferson County. Besides being the eighth leading cause of death in Jefferson County, diabetes is a leading cause of blindness. The purpose of the clinic will be to teach patients to help control their disease because the well-controlled, well-educated diabetic can function normally. The chief nutritionist, physicians, nurses, and dietitians who are working in the medical center are members of the Diabetes Evaluation Committee. This committee is planning teaching materials and methods to be used in the clinic.

Parent-Child Center Pilot Program. A Parent-Child Center, which is sponsored by the Jefferson County Committee for Economic Opportunity, the Department of Pensions and Security, and the Department of Labor, is being planned for Jefferson County. Two staff nutritionists are serving on the planning committee. The purpose of this committee is to assess the needs and facilities of the various community areas and to recommend an appropriate location for the center.

Visiting Nursing Association. The Visiting Nursing Association, which is supported by the Birmingham Community Chest, and the Bureau of Public Health Nursing cooperatively establish their areas of service,

thus increasing the effectiveness of both organizations. The Home Health Aide-Homemaker Service, which is sponsored by the Visiting Nursing Association, is another area in which the nutritionist provides special services. In-service education is provided for the Home Health Aides and the nurses by the nutritionist. Each year, classes on menu planning, meal preparation, food selection, or food budgeting are taught by the nutritionist.

Dietetic Interns' Orientation

Dietetic interns from the University of Alabama Hospital are assigned to Nutrition Services in the health department for two weeks. The nutritionist is responsible for planning an orientation program that provides the interns with an understanding of the principles of public health nutrition.

The dietetic intern becomes familiar with the health department and the various bureaus through interviews and field trips with personnel. Then the nutrition program is described in relation to the other programs within the health department and within the community. The dietetic intern, then, observes the nutritionist as she provides consultation to the nursing homes and as she interviews and teaches patients during various health clinics and home visits. During the second week of orientation, the intern is given the opportunity to participate in several nutrition projects. At the end of the service, the nutritionist and dietetic intern discuss her experience in public health nutrition and evaluate her performance in various nutrition activities.

CHAPTER III

ALABAMA DEPARTMENT OF PUBLIC HEALTH

During the writer's field experience, four days were spent with the Alabama Department of Public Health. The purpose of this experience was to contribute to her understanding of the relationship between the state and county public health programs. Visiting various bureaus and interviewing bureau directors provided the writer with adequate knowledge.

The history and organization of the Alabama Department of Public Health will be mentioned briefly to show the correlation between state and county health departments. However, emphasis will be placed on the programs in the Bureau of Maternal and Child Health with special attention given to the Division of Nutrition Services.

I. HISTORY AND ORGANIZATION

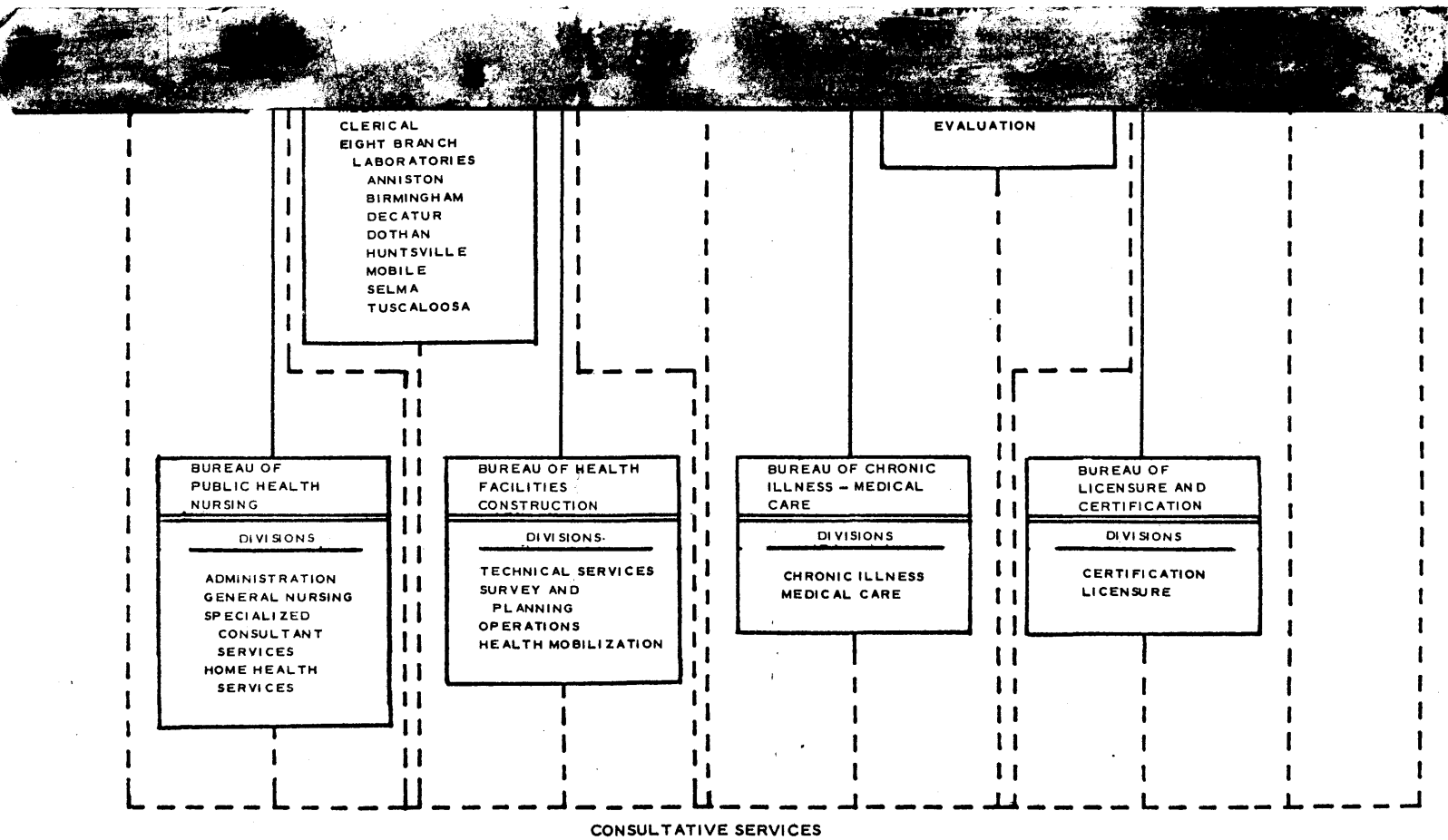
The Alabama State Board of Health was created by the legislature in 1875 and became state financed in 1879. The Medical Association of the State of Alabama is by law the State Board of Health. The executive policy-making body is the State Committee of Public Health. This committee is composed of ten physicians, who are elected by the board, and the governor, who serves as the ex-officio chairman. The State Health Officer is nominated and approved for a five-year term by the state committee (19). The Alabama Department of Public Health is financed

with appropriations from the state legislature and federal government (20). The first public health laboratory was organized in 1907 with the establishment of a branch laboratory in Jefferson County soon afterwards. At the present time, there are eight branch laboratories in addition to the central laboratory (19).

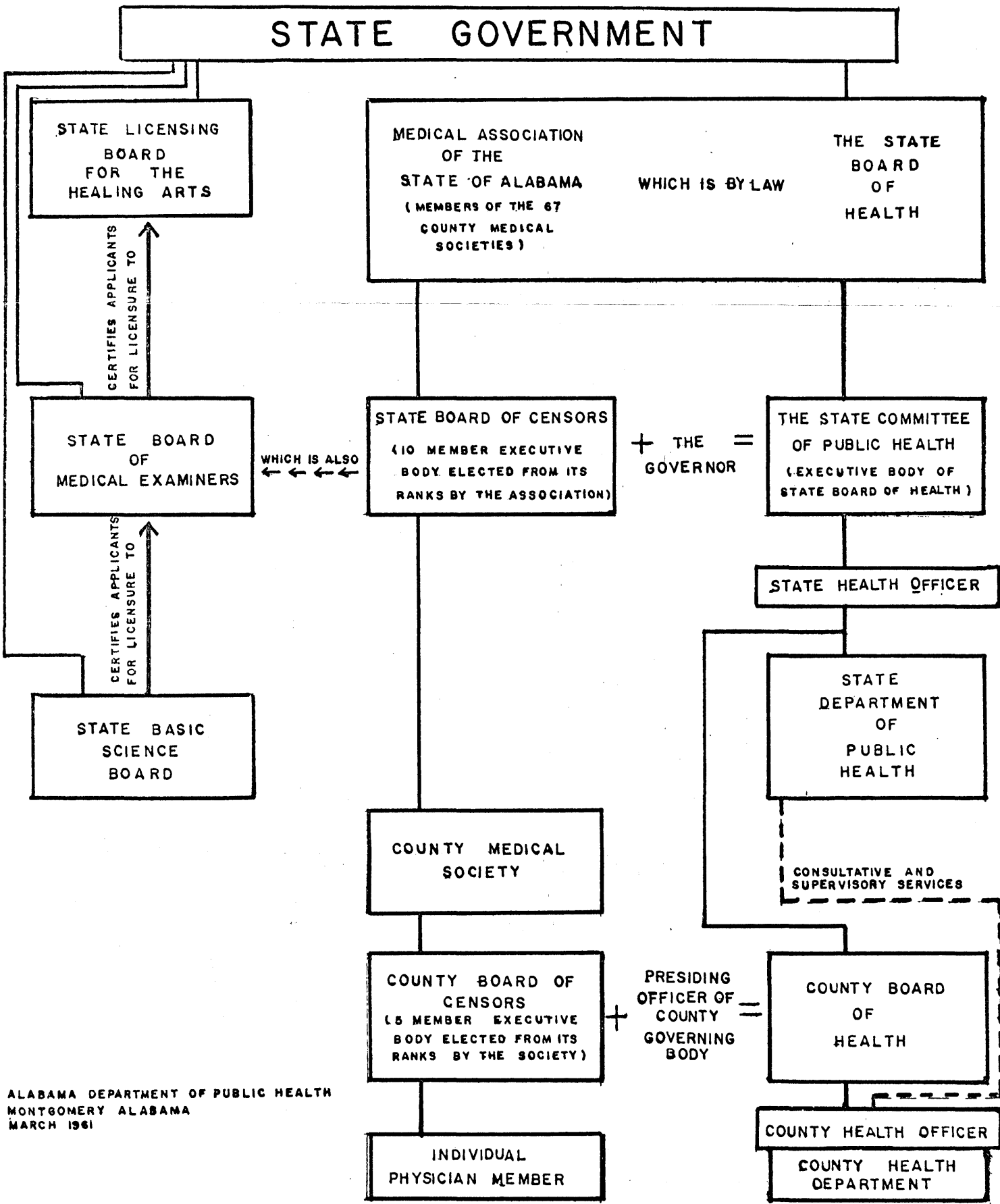
The responsibilities of the Alabama Department of Public Health are divided among thirteen bureaus consisting of a number of smaller units called divisions as shown in Figure 5. The bureaus include Administration, Maternal and Child Health, Preventable Diseases, Environmental Health, Dental Health, Laboratories, Vital Statistics, Primary Prevention, County Health Services, Public Health Nursing, Health Facilities Construction, Chronic Illness-Medical Care, and Licensure and Certification.

The state health department provides advisory services and financial aid to the sixty-seven counties. In return, those counties having a local health program provide direct services for the community. Presently, twelve counties are without local health officers and local programs; therefore, the state is responsible for sending consultants into these counties to render direct services. The Bureau of County Health Services is responsible for the financial and personnel matters of all county health departments with the exception of two departments. Since the county health departments in Jefferson County and Mobile are quite large, each is responsible for its own financial budget and personnel matters (21).

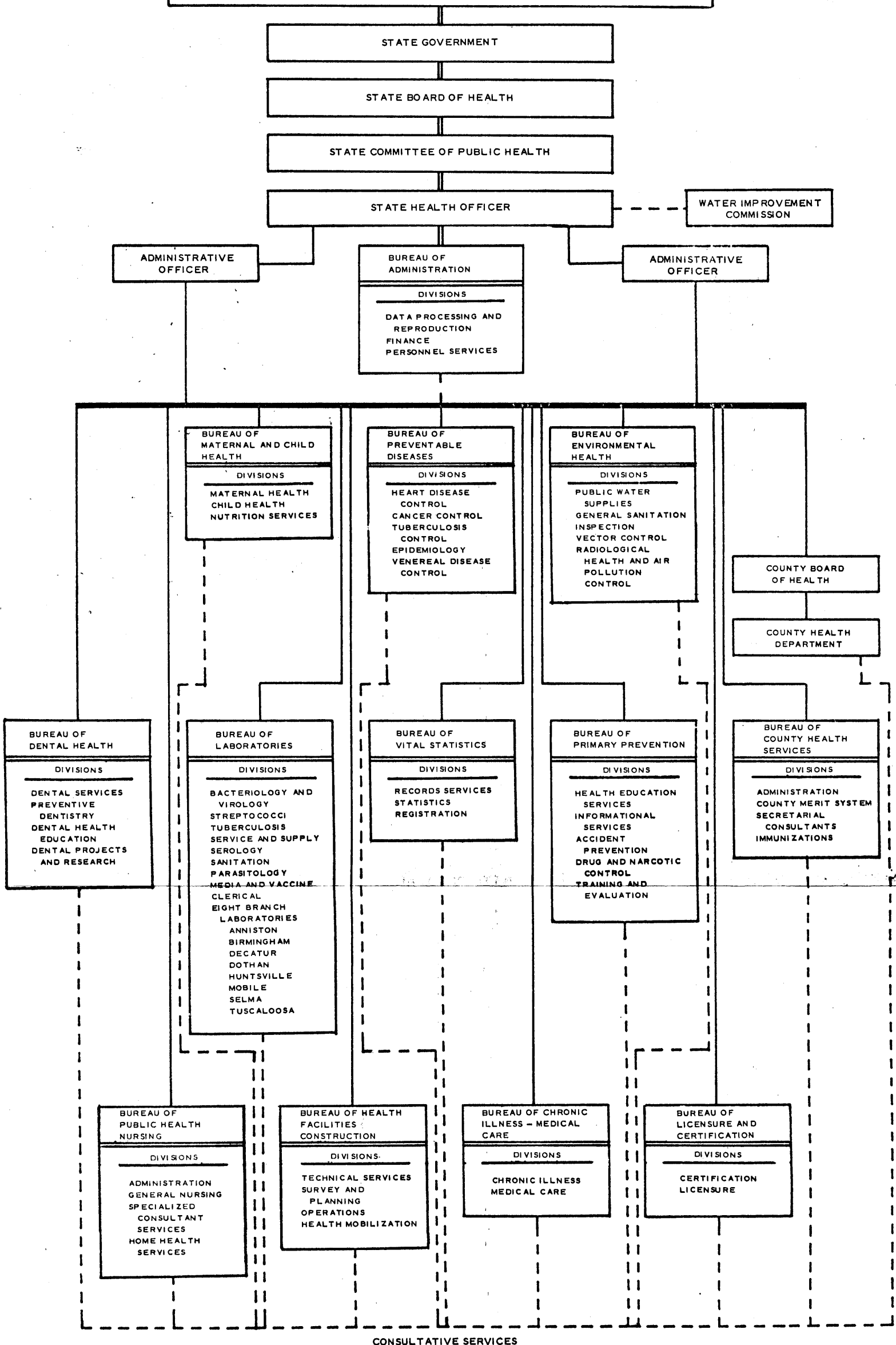
Figure 5. Organizational chart of the Alabama Department of Public Health, Montgomery, Alabama, 1961.



MEDICAL-PUBLIC HEALTH ORGANIZATION IN ALABAMA



ORGANIZATION OF THE ALABAMA DEPARTMENT OF PUBLIC HEALTH



II. BUREAU OF MATERNAL AND CHILD HEALTH

The Bureau of Maternal and Child Health consists of the Divisions of Maternal Health, Child Health, and Nutrition Services. The main objective of this bureau is to improve the health of mothers and children. Funds, which are provided by the Children's Bureau, are administered throughout the state. Since Nutrition Services will be discussed in a later section, only the programs of the Divisions of Maternal Health and Child Health will be covered here.

Division of Maternal Health. In this particular program, several health services are available to mothers. Prenatal and postnatal care of indigent patients is offered throughout the state in seventy-eight clinics. Anemia during pregnancy persists as a prominent complication; therefore, medications are provided for these patients. Further prenatal care may include immunizations against poliomyelitis, tetanus, and influenza and tests for Rh factor and phenylketonuria. Complete postnatal care is available to clinic patients including Papanicolaou smears. Contraceptive advice and materials are made available to patients through planned parenthood clinics. Throughout the state, approximately 230 clinics of this type are in operation (22).

In an effort to discourage patients from using midwives, a cooperative program has been established. In this program, the hospital administrators, physicians, and county health departments obtain hospitalization for pregnant indigent women on a prepayment basis. A twenty-four

hour hospital plan is available in several area hospitals for those indigent patients who cannot manage the prepayment plan (23).

Division of Child Health. An important part of the child health program is the well-baby clinics established throughout the counties. In the clinics, immunizations against diphtheria, pertussis, tetanus, and measles are provided and tuberculin testing is conducted.

Two other important activities are screening for phenylketonuria and the comprehensive pre-school programs for health evaluation. Since the establishment of the phenylketonuria screening program in 1964, four cases have been detected. The comprehensive program for health evaluation recommends that each child undergo an extensive health examination which includes screening for vision, hearing, and mental health. The Bureau of Maternal and Child Health publishes a brochure, The Fourth R Ready for readin', 'ritin', 'rithmetic', which serves as a guide for planning pre-school health clinics. The roles of the participating community members and health team members are defined in the brochure.

III. DIVISION OF NUTRITION SERVICES

The goal of the Division of Nutrition Services is to develop public health nutrition services by applying the knowledge of nutrition to the promotion of positive health, the prevention of ill health, and the dietary control of disease. Nutrition programs are planned throughout the state to accomplish this goal.

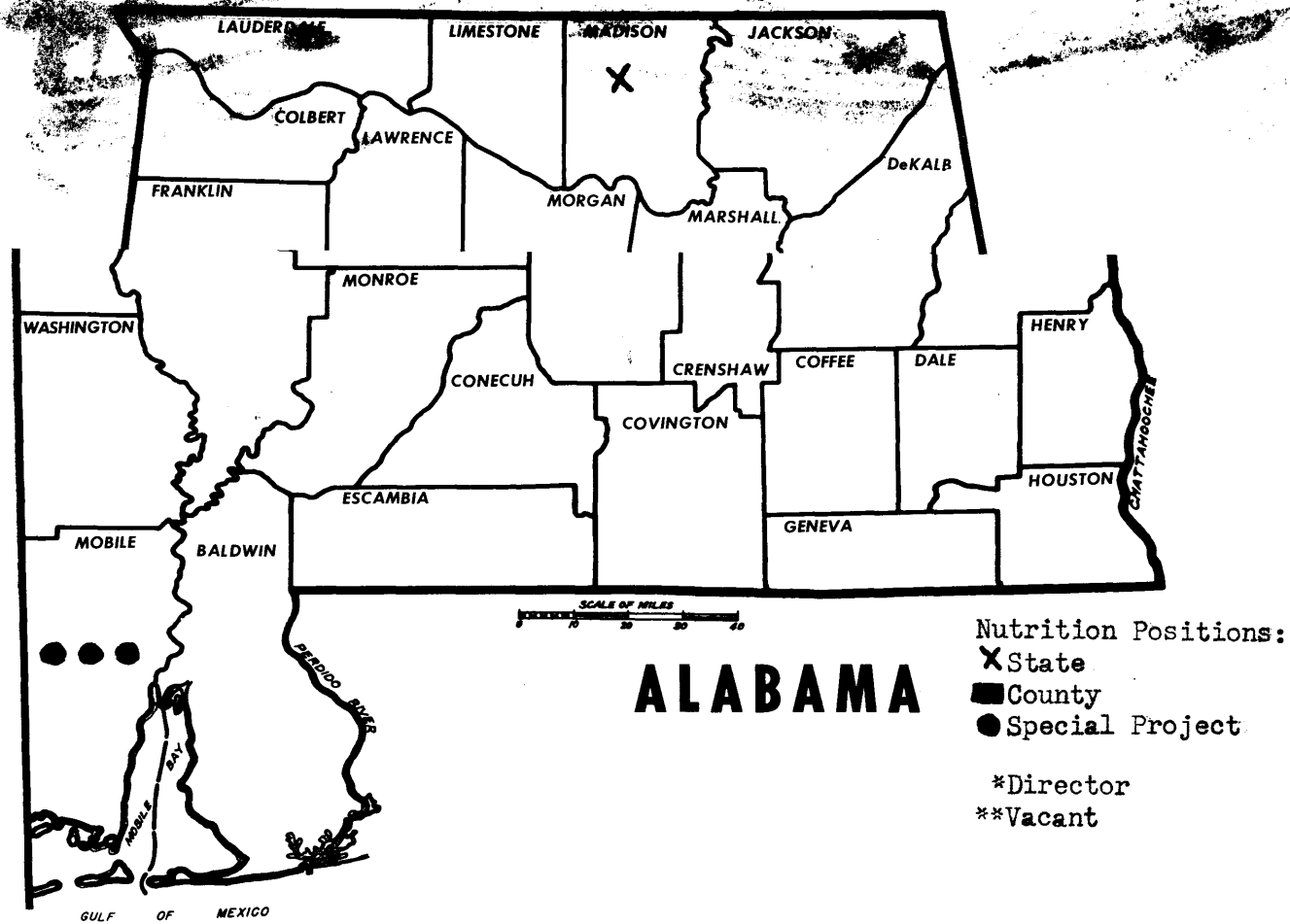
Organization. In the Alabama state merit system, positions have been established for Director of Nutrition Services, two Nutrition Consultants, one Nutritionist, and one Institution Nutrition Consultant. The first four positions are located in the Bureau of Maternal and Child Health. The Institution Nutrition Consultant operates through the Bureau of Chronic Illness-Medical Care, Chronic Illness Division and serves as consultant to nursing homes and their personnel throughout the state.

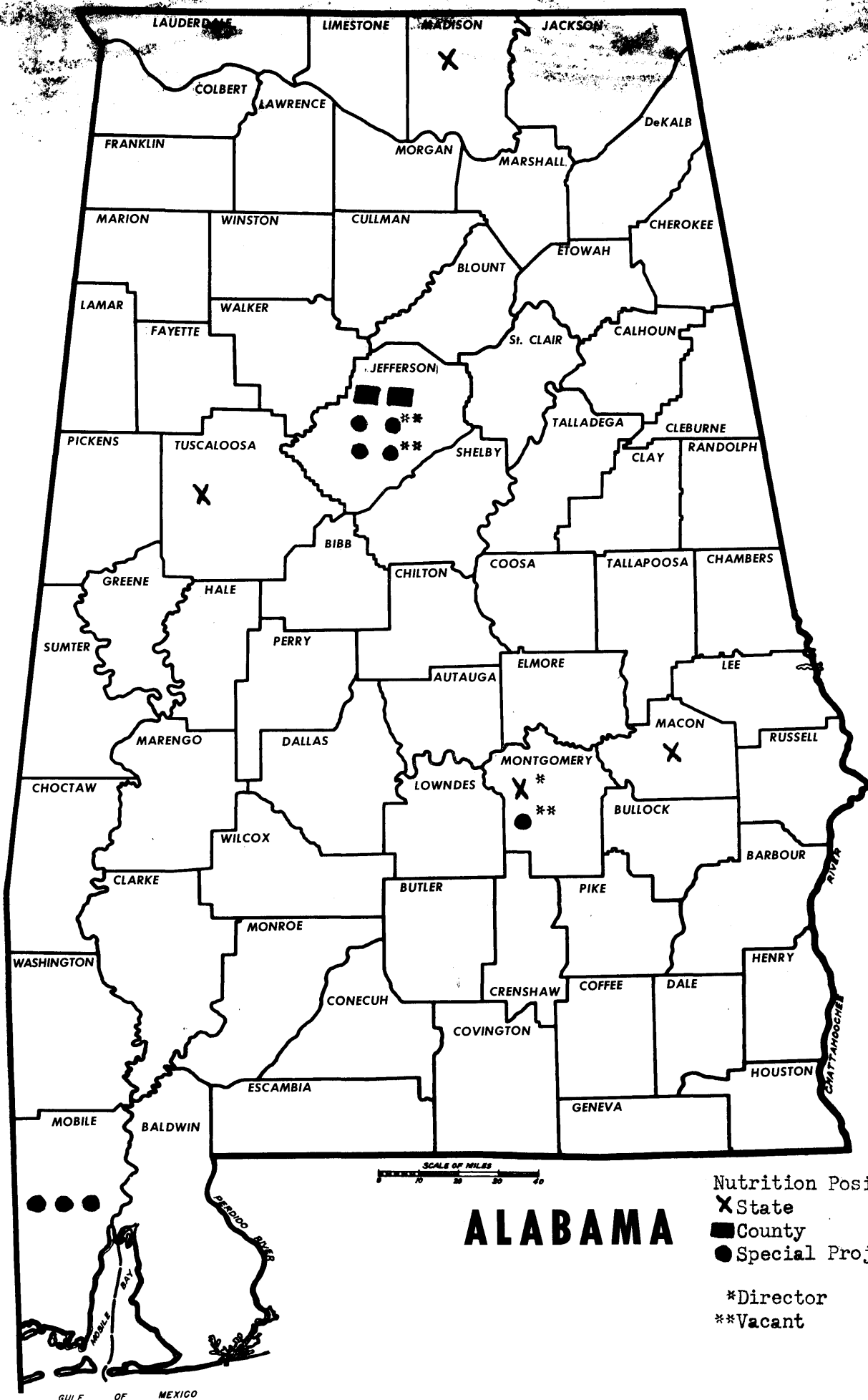
The Director of Nutrition Services is responsible for providing consultation services to all nutritionists within the state. Furthermore, she coordinates all nutrition activities and programs within the state and conducts regular staff conferences for the twelve nutritionists within the state.

Other nutrition positions throughout the state include two nutritionists employed by the Jefferson County Department of Health, four Maternal and Infant Care Project Nutritionists, and one Children and Youth Project Nutritionist. Figure 6 further illustrates the type and location of nutrition positions throughout the state.

Responsibilities of the director. The Director of Nutrition Services renders services throughout the state on a consultant basis. Since nutritionists are not available in most counties, she provides direct services in selected clinics when the need arises. However, the majority of her time is spent teaching other health personnel nutrition information so they, in turn, are able to provide adequate direct

Figure 6. Type and location of nutrition positions in Alabama.





Nutrition Positions:

X State

■ County

● Special Project

*Director

**Vacant

service. The director participates in several annual nutrition education programs, workshops, and conferences throughout the state. Examples are: conducting workshops for the Alabama Department of Education school lunch personnel; participating in planning sessions for the Food Service Conferences for Nursing Homes and Small Hospitals; planning and teaching nutrition classes for the Head Start Program; and attending the monthly in-service public health nursing programs and participating in various programs.

The responsibility of dietary follow-up of diagnosed phenylketonuric infants is assumed by the director. She works closely with the physicians and parents involved in planning a suitable dietary pattern for the infants. Whenever adjustments are needed in the diet, she makes the necessary changes and counsels the parents.

The Director of Nutrition Services prepares and evaluates educational materials. The material may be used by nutritionists and public health nurses in their local programs. Some materials currently being used by the nutrition consultants in the Jefferson County Department of Health are a series of pamphlets on food patterns and needs of the pre-natal mother, nursing mother, and school age child. The Director of Nutrition Services assists other bureaus or divisions in developing the nutrition component of their materials. Through cooperative planning of this type, materials include accurate nutrition information.

Other responsibilities include recruiting and orienting personnel; offering continuous guidance to all nutrition programs within the state;

and providing field experience for students in nutrition. The director orients nursing students and home economics students to the role of a public health nutritionist. She frequently gives lectures in the School of Home Economics at Auburn University and Troy State College and in the School of Nursing at the University of Alabama.

CHAPTER IV

ANALYSIS OF PERFORMANCE IN NUTRITION ACTIVITIES

As already indicated, an important part of the writer's field experience was to analyze the health needs of the community, to show the essential role of the local and state departments of health in supplying programs to meet the health needs of the population, and to demonstrate the relationship of nutrition services at both the local and state levels in supporting and providing programs for the people of Jefferson County and the State of Alabama. Another valuable experience was the opportunity for the writer to analyze her own performance through observation and participation in several types of nutrition activities. Although many opportunities were provided that enabled the writer to obtain insight into her abilities, she has chosen to limit her discussion to the ones which were the most meaningful to her.

Part I is a discussion and analysis of the experiences of the writer in situations demonstrating practical skills frequently used by public health nutritionists. Part II is a detailed description and evaluation of a project developed and conducted by the writer.

I. EXPERIENCES IN NUTRITION ACTIVITIES

Consultation with professional workers. Consultation is a problem solving process occurring between a consultant and consultee to increase the

knowledge or skills of the consultee. The consultant, who is considered the expert on a subject, is giving help, and the consultee is seeking help. The activities of a public health nutritionist involve her in both roles of consultation.

During the writer's field experience, the consultation process was used often with the writer most frequently assuming the role of the consultee. One situation in which she requested assistance was in planning for a class to be taught for the staff members of the Birmingham Housing Authority and the Neighborhood Service Centers. Since the public health nutritionists were responsible for teaching a series of classes on low cost foods to this particular group, they asked the writer to teach the class on principles of meal planning.

The writer knew the basic nutrition knowledge and principles involved in teaching a class of this type; however, she desired background information concerning the group to be taught. Before planning her class, the writer consulted with the chief nutritionist to obtain information about the group. The chief nutritionist had given a pre-test to the group; therefore, these results provided insight into the amount of knowledge possessed by the group. The majority of the group was composed of non-white women with limited formal education. Since no one in the group was able to list the four basic food groups and their contribution to the diet, the chief nutritionist suggested that this information be included in the class to be taught. Consultation with the chief nutritionist enabled the writer to more adequately prepare and present her class. An outline of the class plan is found in Appendix A, page 70.

The chief nutritionist and the writer felt that the class was well accepted by the group. Much enthusiasm and interest was shown by the group with several members participating in the class presentation and discussion.

In-service education. In-service education is important for reviewing information or providing new material to a group. Although the writer observed the nutritionist participating in several in-service educational experiences, she has chosen to discuss, in depth, only two of these.

An in-service maternal and infant care conference, "Improving Care To Mothers-At-Risk", was conducted for the public health nurses. The public health nutritionists were invited to teach the session, "Nutritional Needs of Mothers-At-Risk." The dietary needs of the postpartum patient and her infant were presented by the nutritionists. The writer believed that the class was taught in a practical, educational, and interesting manner. During the discussion period, the public health nurses displayed much interest by asking numerous questions concerning dietary needs.

While visiting the Division of Nutrition Services at the Alabama Department of Public Health, the writer attended an in-service public health nursing conference with the Director of Nutrition Services. This particular conference was held at the Lee County Department of Health in Opelika, Alabama, with public health nurses from seven counties attending. The need for additional information on phenylketonuria was one of the topics discussed. The nurses felt that printed information should

be available for parents attending clinics. The nutrition director joined the discussion and suggested the type of information on phenylketonuria that should be included. Since many of the nurses were unfamiliar with the dietary pattern of phenylketonuric infants, they asked the director to assist them in writing the booklet to be used in the clinics. By attending this conference, the Director of Nutrition Services was available to provide information as the needs arose.

Group work with professionals and nonprofessionals. The nutritionist frequently works with professional and nonprofessional groups. The type of group, of course, determines the techniques she uses. During the writer's field experience, she observed group work with professionals and participated in group work with nonprofessionals.

The chief public health nutritionist was responsible for establishing a Nutrition Committee which included nutritionists and dietitians from the Jefferson County Department of Health, Maternal and Infant Care Project, Children and Youth Project, and the University of Alabama Clinic and Hospital. The purpose of the committee is to coordinate nutrition services and education programs. During the group meeting that the writer attended, the nutritionists and dietitians were developing a referral form to be used by all areas represented by the Nutrition Committee.

During the series of classes taught for the staff members of the Birmingham Housing Authority and the Neighborhood Services Centers, the writer was responsible for preparing and presenting several food demonstrations. In planning for these demonstrations, she considered the types

of foods and the methods of preparation which would be suitable to use with this particular nonprofessional group. Demonstrations were presented on powdered skim milk, Irish potatoes, sweet potatoes, and cabbage. The purpose of the demonstrations was to encourage the staff members to teach the homemakers with whom they work in the housing projects and the Neighborhood Services Centers about a variety of foods and recipes. To further encourage the use of these foods, tasting parties were held after each demonstration, and copies of the recipes were given to the group. The writer believed that the tasting parties were especially effective for this particular group.

The food demonstrations, which were given by the writer, were most helpful to her. Furthermore, she realized that an effective and well-presented food demonstration requires thorough preplanning and pre-preparation. From these experiences the writer learned that effective group work depends on several factors:

1. An understanding of the background knowledge and interest of both professional and nonprofessional groups.
2. An awareness of the community health needs.
3. A familiarity with the available community facilities and resources.
4. The ability of the nutritionist to use suitable techniques to motivate the specific group involved.

Conferences in behalf of planning. A well-organized planning conference with clearly defined objectives is an important procedure

to insure successful end results of a project. The public health nutritionist actively participates in numerous planning conferences.

The writer was provided the opportunity to observe the chief nutritionist assuming an active role in several types of planning conferences. The writer attended conferences held by: the Jefferson County Committee for Economic Opportunity to plan for a Parent-Child Center; the Diabetes Committee to plan for diabetic classes; the director of the dietetic internship program at the University of Alabama and the public health nutritionists to evaluate and plan the dietetic interns' orientation with the health department; and the College of Home Economics, University of Alabama, in Tuscaloosa, to plan for a food service supervisors' workshop. While the writer thought all of the planning conferences were beneficial, she has chosen to discuss the one conducted by the College of Home Economics since more ~~time~~ was devoted to that particular conference.

The Departments of Food and Nutrition and Institutional Management at the College of Home Economics were responsible for conducting a conference to plan a workshop for the food service supervisors to be held in the spring. The chief nutritionist, the student, the state Director of Nutrition Services, the state institutional nutritionist, various hospital and nursing home administrators, and a food service supervisor attended the conference. The participants expressed their opinion as to the topics they felt should be included in the workshop. Beforehand, the chief nutritionist had talked with several of the food

service supervisors in Jefferson County to discover the information they would like included and the areas in which they would like additional help; therefore, her contributions in the planning conference were most helpful. Examples of the areas in which additional help was desired were: planning menus with particular emphasis being given to evening menus; using convenience foods; and learning more information concerning modified diets.

The writer benefited from her observation of a well-organized and stimulating conference. During the planning conference, she was able to observe the chief nutritionist demonstrate two important skills:

1. Her ability to communicate effectively with all participants at the conference.
2. Her organizational ability as demonstrated in pre-planning.

Counseling of nonprofessional persons. A most meaningful experience for the writer was a day spent with a public health nurse making home visits. Several of the patients visited during the day were on modified diets. The writer aided the public health nurse by discussing the various diets with different patients. Before each visit, the writer read the patient's medical record kept by the public health nurse and briefly discussed the case with the nurse. Although counseling usually began by reviewing the food intake and the modified diet with the patient, frequently other areas which were greater problems to the patient entered into the conversation. For example, one patient was a forty-seven year old, non-white widow with three teenage sons. Because of her heart condition and overweight,

she had been placed on a 900 calorie, low sodium diet. Even though the patient was confused and concerned about her diet, she was even more concerned with the problem of buying the amount of food her sons needed. Although the writer provided as much diet counseling as possible, the majority of the visit was spent talking with the patient about food budgeting and preparation.

The home visits made with the public health nurse were most beneficial to the writer. The visits not only reinforced the writer's understanding of the dietary patterns of low income families but provided her with additional experience in directly counseling those families. Furthermore, the writer realized the necessity for flexibility in counseling of non-professional persons. From this experience, the writer believed that she acquired additional skill not only in working with other professionals but in providing meaningful nutrition counseling.

II. DEVELOPMENT OF A NUTRITION PROJECT

During the field experience, the writer developed, conducted, and summarized a survey of the food purchasing practices of the food stamp participants in Jefferson County. The director of the Food Stamp Headquarters, who was interested in the survey plans, readily agreed with the chief nutritionist that the project would be worthwhile.

Description of survey. A survey of food purchases by food stamp participants in Jefferson County was conducted during the months of October and November, 1967. The purpose of the study was to compare and

evaluate the effects, if any, of the Food Stamp Program on food purchasing practices of the participants. The sample consisted of twenty-five eligible families and twenty-five families who had been participating in the program from one month to four years. The eligible group included twelve white and thirteen non-white families. Those already participating in the program included seven white and eighteen non-white families.

Planning and development. The chief nutritionist and the writer met several times to discuss and plan the survey. The survey was conducted at the Food Stamp Headquarters; therefore, twenty-five heads of the household or homemakers, who were applying for food stamps for the first time, and twenty-five, who were returning to buy food stamps, were randomly selected and interviewed. Those people, who were temporarily unemployed due to strikes, were omitted since they generally remain on the program for a short time and would not be typical of the families ordinarily participating in the Food Stamp Program.

The writer planned the survey and summary forms to be used in the project (see Appendix B, page 73). The survey form was a check list of various food items with the necessary space to include the amounts and frequency of food purchased. Other information added was the age and sex of the family members and the income of the family. After pre-testing the survey forms, the writer decided they could be used successfully.

The chief nutritionist and the writer decided that the low-cost food plan developed by the Department of Agriculture (24) should be the basis

of comparison for the families included in the survey. The writer then planned the summary sheets of family food purchases according to the food groups included in the Department of Agriculture's basic low-cost family food plan. A copy of this summary sheet is found in Appendix C, page 74.

To complete the nutrition project, the chief nutritionist and the writer decided that a newsletter would be planned to report the results of the survey. The newsletter was sent to the public health nurses and the Office of the Department of Agriculture in Birmingham since these two groups work directly with these families or similar ones.

Participation. The survey of food purchases by food stamp participants was conducted by the writer, and the fifty interviews were completed. While interviewing the homemakers, some of their needs were observed by the writer. The writer decided that helpful information could be provided for the homemakers through the use of a bulletin board. The writer obtained permission to use the bulletin board at the Food Stamp Headquarters. Since meal planning and economical food purchasing were two of the most common needs noted by the writer, a bulletin board was prepared on economy meals. Three economy menus, which were illustrated with pictures, were listed on the bulletin board. Recipes for the various dishes included in the menus were placed on a table for the homemakers to have. The homemakers observed by the writer seemed interested in the bulletin board and recipes.

In compiling the results of the survey, each family member was listed on the summary sheet according to sex and age. The amounts of the eleven food groups recommended by the Department of Agriculture were recorded for each family member. The total recommended amounts of food for each family were, then, compared with the total amounts of food actually purchased by the family. Numerous comparison tables were prepared by the writer to obtain and evaluate the final results of the survey.

Table 2 is a comparison of the purchasing practices of the twenty-five eligible families with the twenty-five participating families. The comparison reveals that few differences were noted between the buying practices of the families included in this particular survey. However, a higher percentage of the participating families were purchasing the various food groups below the suggested amounts than were the eligible families with two exceptions: dry beans, peas, nuts, and other vegetables and fruits. Furthermore, 50 per cent or more of all the families included in the survey were not purchasing adequate amounts of these food groups: milk, cheese, ice cream; citrus fruits, tomatoes; potatoes; and other vegetables and fruits. Fifty per cent or more of all the families were purchasing above the suggested amounts of these food groups: meat, poultry, fish; eggs; dry beans, peas, nuts; flour, cereals, baked goods; dark green and yellow vegetables; fats, oils; and sugars, sweets. This information can be useful in planning future educational activities for these families. Only in the group participating in the Food Stamp Program

TABLE 2

PERCENTAGE* ELIGIBLE FAMILIES AND ALREADY PARTICIPATING FAMILIES PURCHASING
FOODS IN RELATION TO USDA LOW-COST PLAN

USDA Low Cost Plant	Above		Suggested		Below	
	Eligible	Participating	Eligible	Participating	Eligible	Participating
	%	%	%	%	%	%
Food Groups:						
I. Milk, chees, ice cream	24	4	-	-	76	96
II. Meat, poultry, fish	92	76	-	-	8	24
III. Eggs	52	52	-	-	48	48
IV. Dry beans, peas, nuts	88	84	-	8	12	8
V. Flour, cereals, baked goods	88	80	-	-	12	20
VI. Citrus fruits, tomatoes	32	12	-	4	68	84
VII. Dark green and yellow vegetables	76	60	-	-	24	40
VIII. Potatoes	28	4	-	4	72	92
IX. Other vegetables and fruits	4	16	-	-	96	84
X. Fats, oils	96	92	-	4	4	4
XI. Sugars, sweets	92	84	-	-	8	16

*Percentage based on twenty-five families in each group.

for a period of time were a few families purchasing some of the food groups at the suggested amounts. With the assistance of the chief nutritionist, the writer completed the newsletter, which includes the description and results of the survey (see Appendix D, page 75).

Evaluation. The writer believes the purpose for conducting the survey was accomplished. However, the writer had expected more differences in the food purchases of the newly approved families and those of families already participating in the program. She thought that the families who had been participating in the program for a length of time would be purchasing a better diet than the approved families coming into the program. The results of the survey did not show this. Even though the results obtained were different from those expected, the information indicates the need for ongoing nutrition education for all food stamp participants and also indicates the food groups of major concern. Furthermore, the results demonstrate that increased purchasing power for food does not necessarily guarantee the wisest selection of food.

The survey could have been improved if more time had been available for planning. When over half of the interviews had been completed, an unknown aspect of the Food Stamp Program was discovered. This was, as family income increases, the purchasing power of the food stamp participants also increases. For example, the family of five with a monthly income of \$157.00 will have the food purchasing power of \$84.00 per month; whereas, a comparable family with the monthly income of \$46.00 will have \$64.00 per month. The proportion of money paid by the

families for the food stamps also increases with income. The family with the food purchasing power of \$84.00 will pay \$56.00 for the stamps and will receive \$28.00 of free stamps; whereas, the family with \$64.00 will pay \$16.00 and will receive \$48.00 free. Although the survey results would have been valuable if only families within a specified income range had been included, this procedure would have been difficult due to the limited time available for conducting the survey. However, the writer believes the results are valuable in demonstrating the need for more study and evaluation of the Food Stamp Program and its participants.

In evaluating her performance, the writer gained valuable experience from this activity. By planning, developing, and conducting the survey, the writer obtained greater insight into survey methods and interviewing techniques. She was provided with the opportunity to incorporate related nutrition activities. The experience of writing the newsletter was most beneficial to her. The chief nutritionist was pleased with the writer's performance in conducting the survey and compiling the information. The writer believes that the experience gained through this project will be helpful to her in the future in planning effective programs. From this experience three factors involved in effective educational programs were identified:

1. The need for securing information as a baseline for the beginning of an educational program.
2. The necessity of reporting the information learned to the community and to individuals providing direct services to community members.

3. The importance of using the information obtained to benefit the community.

CHAPTER V

EVALUATION

During eight weeks of field experience, the writer believes that her philosophy and understanding of public health were strengthened. Furthermore, she believes that her objectives were successfully accomplished through the observations and experiences provided for her during the field experience.

As the writer became familiar with the community, she was more aware of the public health problems present. The important role of the health department in meeting these community health needs was evident to her as her own understanding of the organization and programs of the field agency increased. Because of her experiences with both the local and state health departments, she was more aware of the necessity of administrative coordination in planning and providing successful public health activities and programs.

By observing and participating in many activities and situations which involved the nutritionist, the writer acquired a deeper insight into the role of nutrition in relation to programs within the agency and community. Through planning, developing, and participating in a variety of activities, the writer improved her ability to evaluate and, thereby, to strengthen her performance. The writer considers the field experience most valuable and beneficial in providing her with a broader understanding of the principles of public health nutrition.

Both the field experience and academic program of study are necessary and important components in preparing the writer to best assume her role as a future practitioner of public health nutrition. The writer views the field of public health nutrition as challenging and stimulating. The principles and experiences obtained thus far provide a base upon which to build in the future.

As the writer assumes her professional role as a public health nutritionist, she will aim high in striving to fulfill the challenging task delineated by the late Adlai Stevenson:

. . .There is a New America every morning when we wake up. It is upon us whether we will it or not. The New America is the sum of many small changes--a new subdivision here, a new school there, a new industry where there had been swampland--changes that add up to a broad transformation of our lives. Our task is to guide these changes. For, though change is inevitable, change for the better is a full-time job (25).

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APPENDIXES

APPENDIX A

OUTLINE FOR CLASS ON PRINCIPLES OF MEAL PLANNING

Objectives:

To present interesting and easily understood information concerning the importance of the four food groups in meal planning.

To help the staff members understand the factors that influence meal planning.

To stimulate the staff members to encourage families to use the daily food guide in planning meals.

I. Introduction

(Ask class members to write down their intake for the previous day.)

II. Treasure Chest - Guide for meal planning.

A. Golden Nuggets - Bread and cereal group

1. Foods included - Which do you use most?
2. Value or contribution to diet.
3. Recommended servings per day.

B. White Magic - Milk group

1. Foods included.
 - (a) How many use powdered skim milk?
 - (b) Compare costs.
 - (c) Different ways to use powdered skim milk.
2. Values
 - (a) Calcium and protein.
 - (b) Balance meals.
3. Recommended servings per day.

C. Solid Treasures - Meat group

1. Foods included - What are some examples?

2. Values.
 - (a) Protein, B vitamins, minerals.
 - (b) Growth and repair of body tissues.
 - (c) Build blood.

3. Recommended servings per day.

D. Bright Jewels - Fruit and vegetable group

1. Foods included.
2. Contribution to the diet.
 - (a) Vitamin C - Which foods are high in this?
 - (b) Vitamin A - Dark green and yellow vegetables.
 - (c) Add color, texture, and flavor.
3. Recommended servings per day.
4. Hand out leaflets on Basic 4 Food Groups.
5. Evaluate previous day's menu.

E. Summary of Treasure Chest

1. Guides in planning and evaluating meals.
 - (a) Adaptable to many meal patterns.
 - (b) Provides choices within food groups.
 - (c) Amounts needed vary with sex, age and physical activity.
2. Role playing between homemaker and aide.

III. Other factors to be considered in meal planning

A. Food likes and dislikes

B. Color

1. Variety of pleasing colors.
2. Naturally appearing colors.
3. Show bad and good examples of menus.

C. Shapes

1. Show bad and good examples of menus.
2. Irregular shapes.
3. Orderly arrangement.

D. Odor and flavor

1. Taste - Avoid too many strong flavored foods.
2. Seasonings and spices
 - (a) Variety of these to use.
 - (b) Show examples and explain uses.
3. Avoid repetition of same flavors at one meal.
4. Ways to develop taste for new foods.

E. Texture and temperature of food

1. Variation of textures (soft, firm, crisp, smooth, rough).
2. Contrast of hot and cold foods.

IV. Summarize

Materials:

Magnetic board.

Food models.

Treasure chest with food groups.

Foods illustrating good and bad menus.

Scripts for role playing.

Leaflets of Basic 4 Food Groups.

APPENDIX B

NUTRITION SURVEY FORM

Survey of Food Purchases by Food Stamp Recipients
Length of time on program _____

<u>Foods</u>	<u>Amount</u>	<u>Foods</u>	<u>Amount</u>
<u>Milk:</u>		<u>Breads and Cereals:</u>	
Type _____		Bread _____	
Cheese _____		(Canned Biscuits) _____	
Ice Cream or Ice Milk _____		Flour _____	
		Cornmeal _____	
<u>Meat:</u>		Oatmeal _____	
Beef _____		Grits _____	
(round, stew, roast, steak)		Cold Cereals _____	
Pork _____		Noodles and Spaghetti _____	
Fish _____		Rice _____	
Weiners _____		Cake Mixes _____	
Cold Meats _____		Crackers _____	
Poultry _____			
Dried Beans _____		<u>Fats:</u>	
Peanut Butter _____		Margarine or Butter _____	
Meat Pies _____		Oils _____	
T-V Dinners _____		Shortening _____	
Canned Meats _____		Salad Dressing _____	
(stew, spaghetti, chili, tuna)		Mayonnaise _____	
Eggs _____		Nuts _____	
		Bacon or Sausage _____	
		Salt Pork or Fat Back _____	
<u>Fruits and Vegetables:</u>		<u>Other Foods:</u>	
Citrus Fruits _____		Candy _____	
Apples _____		Cookies _____	
Grapes _____		Soft Drinks _____	
Bananas _____		Kool-Aid _____	
Canned Fruits:		Potato Chips or Fritos _____	
Applesauce _____		Sugar _____	
Frozen or canned Fruit Juice			
Vegetables _____			
(greens, carrots, sweet potatoes)			
Tomatoes _____			
Others _____			
(including potatoes)			

APPENDIX C

SUMMARY FORM OF FOOD PURCHASES

White____Non-White____
Length of the Program

Summary of Food Purchases by Food Stamp Recipients

Food Groups:	Family Members:			Suggested Total	Total Food Purchases
I. Milk, cheese ice cream (qt.)					
II. Meat, poultry, fish (lb. oz.)					
III. Eggs (No.)					
IV. Dry beans (lb. oz.)					
V. Flour, cereals (lb. oz.)					
VI. Citrus fruit, tomatoes (lb. oz.)					
VII. Dark green and yellow vegetables (lb. oz.)					
VIII. Potatoes (lb. oz.)					
IX. Other vegetables (lb. oz.)					
X. Fats, oils (lb. oz.)					
XI. Sweets, sugar (lb. oz.)					

APPENDIX D

NUTRITION NEWSLETTER

VITA

Joanne Riggins Mounger was born on March 5, 1940 in Knoxville, Tennessee. She was married to Emerson Jay Mounger in 1967.

The author graduated from East High School in Knoxville, Tennessee in 1958. After receiving her B. S. Degree from The University of Tennessee in 1961, she completed her dietetic internship at Charity Hospital in New Orleans, Louisiana.

The author was employed as a therapeutic dietitian at Baptist Memorial Hospital in Memphis, Tennessee from 1963 until 1965. She then was employed as a research dietitian at the Clinical Research Center with The University of Tennessee in Memphis from 1965 until 1966. She is presently employed as chief nutritionist with the Children and Youth Project in Birmingham, Alabama.