To the Graduate Council:

I am submitting herewith a thesis written by Barbara Roberson Siegel entitled "A Field Experience with the Nutrition Section Chattanooga-Hamilton County, Tennessee, Health Department." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Daniel W. Hubbard

Daniel W. Hubbard, Major Professor

We have read this thesis and recommend its acceptance:

Roy E Beauchene

Bert Jones

Accepted for the Council:

Hilton A. Smith

Vice Chancellor
Graduate Studies and Research

A FIELD EXPERIENCE WITH THE NUTRITION SECTION CHATTANOOGA-HAMILTON COUNTY, TENNESSEE, HEALTH DEPARTMENT

A Thesis

Presented for the

Master of Science

Degree

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Barbara Roberson Siegel

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B. R. S.

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ABSTRACT

This thesis provides an analysis of the student's experiences during seven weeks field training with the Nutrition Section of the Chattanooga-Hamilton County Health Department. The purpose of this field experience was to supplement the student's academic training by providing her with the appropriate background experience for her future role as a public health nutritionist.

The field experience helped the student 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 specific service activity was to furnish nutrition consultation to a family with multiple problems and to develop a nutritional case study of the family.

The field experience provided the student with a broader understanding of the responsibilities and functions of the public health nutritionist in the total health program. From this field experience and the knowledge acquired in the academic program, the student feels she has developed techniques and skills which will be most helpful in her future practice of public health nutrition.

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CHAPTER I

INTRODUCTION

The following report covers seven weeks of field training in Public Health Nutrition with the Chattanooga-Hamilton County Health Department. The field experience was planned by the nutrition faculty of The University of Tennessee and by the nutrition consultant of the Chattanooga-Hamilton County Health Department to supplement the academic education and previous background of the student.

A variety of supervised work experiences were provided for the student. This variety of experiences was particularly important to the student since her previous work experience in the field of public health was limited. These activities contributed to the student's understanding of how the nutrition service is related to the total health program and helped her to develop a more comprehensive understanding of the principles of public health.

The objectives of the supervised field experience were:

1. To gain an understanding of the health needs of a community and how a public health program is developed to meet these needs.

2. To study the organization and administration of a public health agency on the local level.

3. To gain a more complete understanding of the nutrition component and its function within the public health agency.

4. To observe and participate in the nutrition services and then evaluate her abilities as a future public health nutrition consultant.

This thesis will present the student's observations and activities during the field experience. Information concerning the history, population, vital statistics, economy, education, and government of Chattanooga and Hamilton County are described in Chapter II. Chapter III provides a brief discussion of the history and organization of the Chattanooga-Hamilton County Health Department including the programs and services offered by the health department. The Nutrition Section of the health department and the specific activities of the nutrition consultant are described in Chapter IV. Chapter V consists of an analysis of the student's own performance and a nutritional case study showing the student's interdisciplinary involvement with a high risk family. A summary and an evaluation of the field experience are found in Chapter VI.

CHAPTER II

HAMILTON COUNTY

Hamilton County is on the Tennessee River at the southern boundary of Tennessee. It adjoins Georgia and is the geographical center of the Tennessee Valley Authority's development area. Chattanooga is the principal city in the county (1).

History and Development

The Hamilton County area was first explored by DeSoto in 1540. Hamilton County was formed in 1819 and Chattanooga first settled in 1828 at the site of Ross' Landing. The city of Chattanooga was incorporated in 1839. During the Civil War, the area was the scene of the decisive battles of Chattanooga, Lookout Mountain, Chickamauga, and Missionary Ridge (2).

Although the municipal government of Chattanooga was dissolved during the Civil War, it was re-established on October 9, 1865. The first serious problem of the newly established city government was to contend with an epidemic of smallpox (3).

In 1878 Chattanooga was attacked by a severe scourge of yellow fever which claimed the lives of 366 citizens. An epidemic of cholera attacked the city in 1883 and a scourge of smallpox again threatened the people. Out of these experiences came an awakening to the need of better sanitary conditions. Bonds were issued for constructing sewers, steps were taken to free the city of mosquitoes, and foods were

inspected. These and subsequent improvements made Chattanooga a more healthful place in which to live (3).

Population

Hamilton County has steadily increased in population since its inception. The population of Hamilton County increased 7.2 percent from 1960 to 1970, and the estimated population for 1972 was 257,502. The increase in population resulted in an increase in the services offered by the health department to help meet the needs of the community (4,5). During this same time the population inside the city of Chattanooga in 1960 was 130,009 and had decreased in 1970 to 119,923 (4). In 1970, 41.2 percent of the population lived in the rural areas of Hamilton County, with 58.9 percent classified as urban (6).

According to 1970 census figures, the ethnic configuration in Hamilton County is 18.4 percent nonwhite and 81.6 percent white. The city of Chattanooga, however, has 36.8 percent nonwhite and 63.2 percent white (4).

Approximately 8 percent of the population in Hamilton County is under five years of age, and 9.7 percent of the population is sixty-five years and over (7). Although not the largest element of the total population, these two age groups contribute to the leading causes of death in Hamilton County. Because of this fact, providing adequate services for these age groups must be of particular concern for the health department.

Vital Statistics

The vital statistics of a county often reflect the health needs of the county's population and are a major consideration in the development and justification of health programs. The following is a brief account of the characteristics of Hamilton County's population as revealed in vital and health statistics.

The live birth rate in Hamilton County per 1000 population decreased from 18.8 in 1971 to 16.6 in 1972. There was an unexplained increase in the infant death rate per 1000 live births to 29.2 in 1972 as compared to 19.9 in 1971. There was also an increase in premature births in 1972 to 88.6 per 1000 live births as compared to 81.3 in 1971. The percentage of illegitimate births in 1972 was 16.1 percent of the total registered live births (8,5).

The rate of fetal deaths in 1970 in Hamilton County was 16.7 per 1000 registered live births as compared to the state of Tennessee with 15.5 per 1000 registered live births. The neonatal death rate in 1970 for Hamilton County was 20.4 per 1000 live births compared to 16.4 per 1000 live births for Tennessee. This gives an important indication that there is a great need for prenatal and infant health services in Hamilton County. This is even more apparent when considering the non-white population of Hamilton County as their neonatal death rate was approximately 40 percent higher than that of the white rate in 1970 (9).

Information concerning the ten leading causes of death is shown in Table 1. The leading causes of death in Hamilton County are compared with those of the United States. The ten leading causes of death in

TABLE 1

COMPARISON OF THE TEN LEADING CAUSES OF DEATH IN THE UNITED STATES AND HAMILTON COUNTY 1972

Rank	United States	Hamilton County
1	Diseases of heart	Diseases of heart
2	Malignant neoplasms	Malignant neoplasms
3	Cerebrovascular diseases	Cerebrovascular diseases
4	Accidents	Accidents
5	Influenza and pneumonia	Influenza and pneumonia
6	Diabetes mellitus	Diseases of early infancy
7	Diseases of early infancy	Diabetes mellitus
8	Arteriosclerosis	Homicide
9	Cirrhosis of liver	Bronchitis, emphysema and asthma
10	Bronchitis, emphysema and asthma	Suicide

Source: Monthly Vital Statistics Report Annual Summary for United States 1972 United States Department of Health, Education and Welfare. Volume 21, Number 13 and Chattanooga-Hamilton County Health Department 1972 Annual Report. Chattanooga-Hamilton County Health Department, Chattanooga, Tennessee.

the United States accounted for 84 percent of the total deaths in the United States in 1972. Most of the leading causes of death for Hamilton County and the nation as a whole, are associated with the older segment of the population. Disease of early infancy is ranked as the sixth leading cause of death in Hamilton County and is ranked seventh in the United States. Diabetes mellitus is ranked one position higher in the United States than in Hamilton County. Two of the ten leading causes of death in Hamilton County are homicide and suicide which are not ranked in the top ten for the United States (10).

Morbidity statistics indicate that diseases of early infancy have decreased from fifth to sixth leading cause of death from 1970 to 1972 in Hamilton County. In 1972, influenza and pneumonia ranked fifth while in 1970 it did not rank in the top ten leading causes of death. Tuberculosis was ranked number nine in 1970 and not ranked in 1972. Bronchitis, emphysema, and asthma, although not ranked in 1970, had risen to number nine in 1972. Suicide and homicide both dropped two positions in the 1972 ranking as compared with the 1970 ranking (11,5). The Hamilton County total death rate in 1972 was 11.3 per 1000 population which was an increase as compared to the rate of 9.0 per 1000 population in 1971 (5,8). The death rates for Tennessee and the United States in 1972 were 10.3 and 9.4 per 1000 population respectively (10).

Economy and Education

Regardless of how urgent the health needs of an area may be, the degree to which those needs may be met will be affected by the resources

available. A determining factor in the availability of these resources is the economic conditions of the area.

The Chattanooga area is served by four Interstate Highways and was among the first cities to have the interstate system completed for through traffic. Chattanooga's strategic location on the Tennessee River provides an excellent economical method of transportation for industries in the area. It also has good rail and air service (12,4).

There are over 590 manufacturers in the Chattanooga area employing 55,000 individuals with an annual payroll over $350 million. More than 1500 classified products are produced. Some of the principle products are: textiles, fabricated metals, chemicals, primary metals, food products, machinery, apparel, paper products and leather goods. The total value added by manufacture in 1969 was $741,600,000 (12). The Chattanooga area has enjoyed a multimillion dollar tourist business but this most likely will be affected in 1974 by the energy crisis.

In 1970, the median income for Hamilton County was $9,059. The total income for the county amounted to $730,286 million. The income for Hamilton County is fairly high, as indicated, but there are still many pockets of poverty in the area, particularly in the inner city section of Chattanooga (12).

The city and county both maintain school systems. There are 51,977 students enrolled in public schools, 4,107 in parochial schools, and 2,234 enrolled in private schools in the Chattanooga-Hamilton County area in 1973. In the Chattanooga area there is an observatory of music, a state technical institute, a state area vocational-

technical school, three liberal arts colleges, a seminary, and vocational and technical high schools. The University of Tennessee at Chattanooga became affiliated with the state-wide system of The University of Tennessee on July 1, 1969. It has a total enrollment of 4,920 students (12).

There are a total of 18 hospitals, clinics, and sanitariums located in the immediate Chattanooga area with a total of 2,867 hospital beds. A 125 bed hospital is presently being constructed (12).

Government

Hamilton County operates under a council-manager form of government composed of the County Judge as chairman and four members, elected by popular vote to serve four-year terms. Principal departments of the county government are:

Department of Highways and Public Works,

Department of Auditing, Purchasing and Welfare,

Hamilton County Board of Education,

Hamilton County Juvenile Court,

Board of Trustees, Erlanger and Children's Hospitals.

Chattanooga operates under a commission form of government and is governed by a mayor and four commissioners, elected for four-year terms. Each commissioner serves as the active administrative head of one of the following departments:

Department of Finance and Public Affairs,

Department of Fire and Police,

Department of Public Utilities, Grounds and Buildings,

Department of Streets and Sewers,

Department of Health and Education (13).

CHAPTER III

THE CHATTANOOGA-HAMILTON COUNTY HEALTH DEPARTMENT

The student's field experience was spent with the Chattanooga-Hamilton County Health Department. This experience was conducted under the direction of the nutrition consultant employed by the health department. Orientation to the health department was provided by tours and personal interviews with public health personnel and individual instruction to patients and groups. During the field experience the student talked with the directors of five divisions as well as with the Health Director of the Chattanooga-Hamilton County Health Department. The purpose of these interviews was to learn about the programs and services offered by the various divisions and the health department as a whole. A brief description of the divisions is included in this chapter. Nutrition services available to the divisions will be discussed in a later chapter.

I. HISTORY AND ORGANIZATION

Prior to 1941 there existed two health departments in Hamilton County. There was a county health department and a separate health department for the City of Chattanooga. The first nurse was employed by the City of Chattanooga in 1918 and a county board of education was established in 1896. The health departments originated in the latter part of the 1800's with the appointment of a sanitary officer in 1880. A county health department was organized in 1926 (14). In 1941, the

Chattanooga Health Department and the Hamilton County Health Department merged to become the Chattanooga-Hamilton County Health Department (15).

The main supervisory bodies of the Chattanooga-Hamilton County Health Department are the Advisory Board and the County Council. The members of the Advisory Board are principally citizens selected from community agencies to represent Chattanooga and Hamilton County. This Board meets quarterly and its function is to advise the health department on policies and programs, to review the budget, and make recommendations on it to the County Council. This Board has no regulatory control over the health department.

The governing board of the health department is the County Council. Hamilton County is the only county in Tennessee without a Board of Health, therefore, the County Council serves in lieu of a Board of Health. There are five members of the County Council with one member being the County Judge who is the executive officer of the county. The County Council furnishes administrative supervision for the health department and has the responsibility of approving the budget.

Budget

The County Council is the fiscal agent of the health department. The four main sources of funds for the health department come from Hamilton County, the State of Tennessee, the United States Government and fees and other income. Some of the fees which are charged are foodhandler fees, chest x-rays, septic tank permits, parking lot receipts, and fees from the chronic disease program. For the 1972-1973

fiscal year the approximate expenditure of the Chattanooga-Hamilton County Health Department was $868,000 compared to $790,000 for the 1971-1972 fiscal years (5).

Branch Health Centers

At the present time there are nine branch health centers in addition to the central office of the health department.

The majority of the branch health centers have a Neighborhood Health Advisory Committee. This committee serves as a liaison between the neighborhood and the health department, helping to interpret community needs to the department and department concerns and problems to the community, as well as helping obtain resources for providing needed services (5).

The branch health centers have been located in areas where the greatest needs for medical care have been identified.

East Side Health Center. This center began as a federally funded project to last five years. After this five year period it was the understanding that the city or county would take over the funding of this health center. The center began as a demonstration project to test the feasibility of decentralized health services and to see what impact this would have on upgrading an economically depressed area of the City of Chattanooga. This center is actually a suite of offices and treatment rooms prepared especially for the health component within the East Side Neighborhood Center. In 1972 an estimated 9,000 persons received 37,000 services through this health center (5).

Model Cities Health Center. When the Model Cities program came into being, the Neighborhood Health Task Force became the committee through which the health department worked. The Model Cities Project, funded and named "Stop Gap" Health Services Program, was provided space in the East Area Neighborhood Service Center. In addition to providing generalized health services, this center also provides dental services. This center is open daily from 8:00 a.m. to 4:00 p.m.

Hixson Health Center. The First Baptist Church of Hixson provided space for the health center in that area. The clinic area and waiting room area are set up on the "gym" floor. The building is well lighted, clean, maintained and decorated with cheerful colors. This health center does not have a Neighborhood Health Advisory Committee since there does not seem to be a need for one.

Walden's Ridge Health Center. The residents of this area secured space for this health center on Signal Mountain in the Fairview Presbyterian Church. Presently, there is no officially constituted Health Advisory Committee for this center, however, a group of interested women who live in the area have served the center in a variety of ways--with printed information on health topics, with transportation, and with other volunteer services. This center, as well as the Hixson Center mentioned above, is open one day per week from 9:00 a.m. to 3:30 p.m.

Soddy-Daisy Health Centers. The Neighborhood Health Advisory Committee for the Soddy-Daisy area has been most supportive of the

health center establishments in this area. The Soddy Health Center is presently located on the second floor of the old parsonage beside the Soddy United Methodist Church. During January and February of 1973 137 people received 490 services at this center (5).

The Daisy Health Center is located in a trailer purchased by the Daisy City Commission. The trailer was set up on city-owned property beside the fire hall just off Highway 27 in Daisy. The Soddy and Daisy Health Centers serve the area of north Hamilton County and are both open one day per week from 9:00 a.m. to 3:30 p.m. At the present time consideration has been given to combining these two centers.

Bakewell Health Center. This center serves the Sale Creek, Coultersville, and Bakewell areas and is housed in the Bakewell Federated Church on Back Valley Road. During January and February of 1973 116 people received 457 services at this center.

North Highway 58 Health Center. This center is located in a group of buildings at the intersection of Mahan Gap Road and Highway 58. The owner of this property put in partitions and generally re-decorated the space. Committee members solicited items for the center and donated furniture for the waiting rooms. Services are available at this center one day each week from 9:00 a.m. to 3:30 p.m.

Mid-Central Health Center. The Mid-Central Health Center is one of the first to have its own building separate from any other agency or office. This center is situated in a small building which formerly had been a doctor's office and is located at the corner of Main and

Railroad Streets in Ooltewah. This center is also open one day per week from 9:00 a.m. to 3:30 p.m. (5).

II. ADMINISTRATIVE UNITS

The Chattanooga-Hamilton County Health Department is a unit composed of eight divisions and each division is organized and staffed to conduct certain phases of the program. The divisions are Administration, Environmental Health Services, Communicable Disease Control, Public Health Nursing, Health Education and Information, Research and Development Health Statistics, Dental Health, and the Regional Branch Laboratory. Nutrition is placed under the Director of Communicable Disease Control. This has the advantage of providing medical supervision for the nutrition consultant. An organization chart is shown in Figure 1.

Division of Administration

The Division of Administration is concerned with the making of broad executive and administration policies for carrying out an effective public health program. Public relations, interdepartmental relations, the execution of financial matters, accounting, purchasing, and similar activities are the responsibility of this division.

Research and Development Health Statistics

The Vital Statistics Services are responsible for keeping complete and detailed records of diseases, population characteristics, births, and deaths for the county. It makes available certified

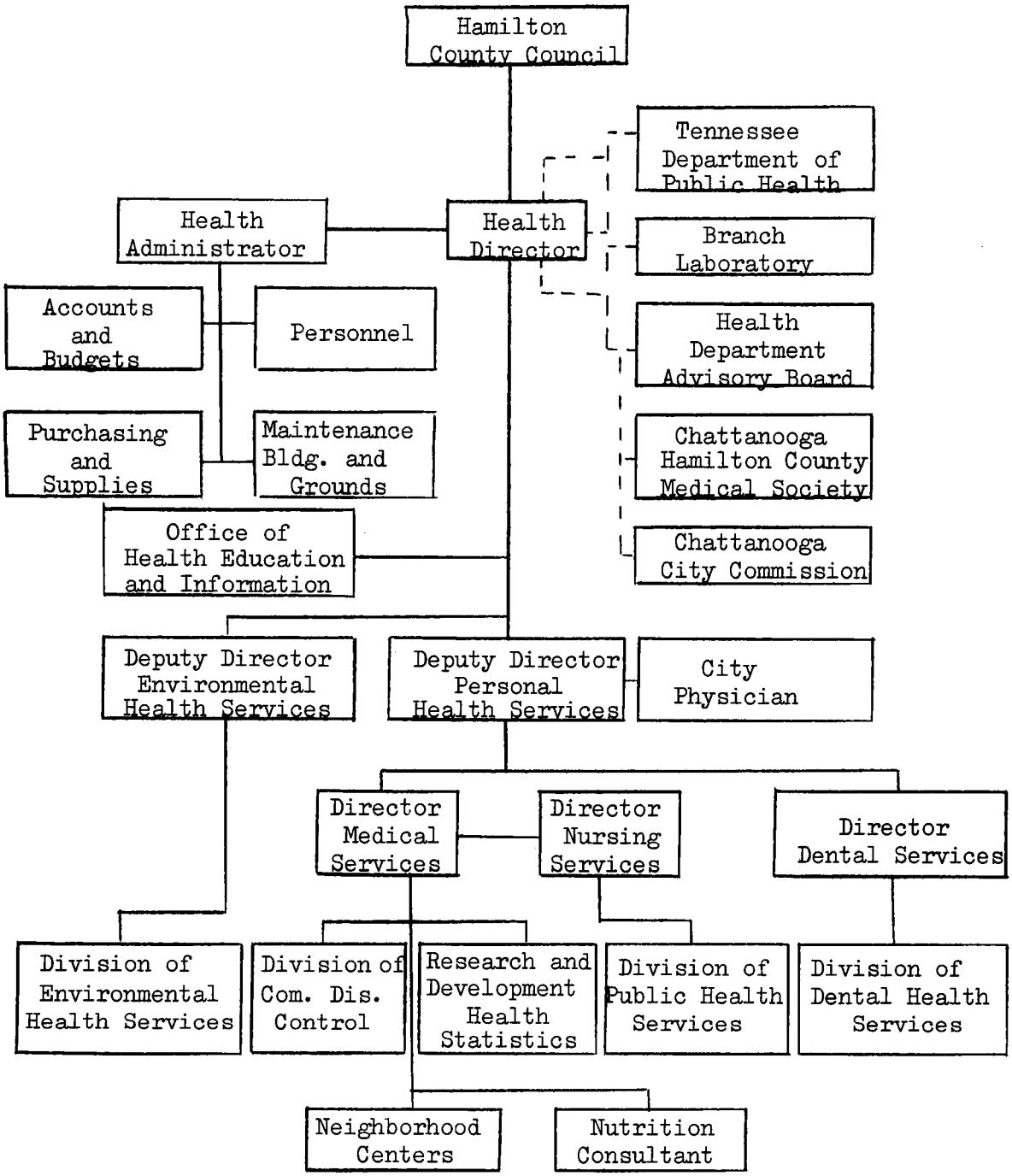


Figure 1. Chattanooga-Hamilton County Health Department organization chart, 1973.

copies of birth and death records and permits for burial, cremation, and transportation of bodies to authorized persons. A few of the other duties of this division are: to prepare and forward weekly reports of birth and death certificates to the State Office of Vital Records, to prepare and forward Weekly Mortality Report to Communicable Disease Center in Atlanta, and the development of statistical studies of special health programs (16).

Division of Dental Health

Under the Division of Dental Health a wide variety of programs are offered. During 1973 dental services were provided to preschool children enrolled in Headstart programs, day care centers, and the Parent-Child Center. School children received dental services through the Incremental Program, Follow Through Program, Co-operative Program, and the Parent-Child Program. Adults were provided dental services during 1973 if they were pre-natal patients, family planning patients, involved in Neighborhood Service projects, Model Cities program, or the Parent-Child Center. Special consideration for dental services were given to children cared for by certain agencies located in the county. These agencies whose children received services in 1973 were the Bonny Oaks Home, Children's Home, Bethel Bible School, Baptist Children's Home, Min-Tom Home, and Chambliss Home (5).

Division of Communicable Disease Control

The Division of Communicable Disease Control is concerned with the control of contagious diseases in the community. When a

communicable disease does occur, immediate steps are taken to prevent its spreading. At the present time this division is concerned mainly with tuberculosis control, venereal disease control and other communicable diseases such as infectious hepatitis and salmonellosis.

Tuberculosis control. Even though tuberculosis does not appear as one of the ten leading causes of death, it is still a major public health problem in Hamilton County and Chattanooga. In 1973 there were 72 new cases of tuberculosis reported in Hamilton County. Included in the tuberculosis control program is the maintenance of a tuberculosis file of all known cases, follow up of all cases, administration of skin tests, and x-ray services including tests of sputum. The Branch Laboratory processes the sputum specimens for the patients of Hamilton County (17).

Venereal disease section. Venereal disease has reached epidemic proportions in Hamilton County in the last few years. Different authorities state that this increase could be due to public apathy, changing morals, and the widespread use of the contraceptive pill. Although there is definitely an increase in reported new cases, it must be remembered that this could partially be influenced by the increase in the number of persons seeking treatment who might not have done so in the past and improved methods of finding their contacts. The number of patients treated for venereal disease at the Chattanooga-Hamilton County Health Department has steadily increased. There were 42 cases of syphilis treated at the health department in 1972. There were 1,822

cases of gonorrhea diagnosed and reported. This was an increase of nearly 400 over 1971 (5).

To help combat this problem of venereal disease an extensive education program is being administered. A total of 8,778 people received venereal disease information and education through film showings, talks, and discussions. A state funded venereal disease "Hotline" is presently in operation to provide information on venereal disease to anomynous callers. This information is given by the Health Education staff to any interested person.

Laboratory

The Laboratory is an integral part of the Chattanooga-Hamilton County Health Department and is unique in that it serves as a regional laboratory for the Tennessee State Department of Health. Laboratory services are, therefore, available to the Chattanooga-Hamilton County Health Department and to other health departments, physicians, and individuals in the region.

The following tests are performed by the Laboratory: feces examinations for intestinal parasites, blood tests for syphilis, streptococcal tests, enteric infection tests, sputum tests for tuberculosis, animal heads checked for rabies, gonorrhea cultures, and tests of water quality. The above tests plus a number of others make a total of 116,490 done by the Laboratory in 1972 (5).

All PKU tests are sent to the State Central Laboratory for analysis, therefore, this is not a function of the Regional Laboratory.

Division of Environmental Health

Much of the work of this division is carried out in cooperation with other agencies of city and county government. It consists of inspection, recommendation, withholding of approval, and even legal action to overcome some of the worst infringements on the environment in which we all live.

This division was concerned in one way or another with licensing and inspection in 1972 of: jails; day care centers and nurseries; public, private, and parochial schools and kindergartens; nursing homes; day care homes; and children's homes (5).

Besides licensing, the Environmental Health Division is responsible for inspection of subdivisions, mobile home parks, sanitary landfills, establishment of rabies clinics, and providing in-service training programs for school cafeteria employees (18).

Health Education and Information

The staff of the Division of Health Education and Information work cooperatively with the other divisions in program planning and evaluation of health education activities. This division serves as the public relations medium of the health department. The direct responsibilities of this division include operation of the print shop, maintenance of a reference library and pamphlet room, preparation of news releases, development of a bi-monthly newsletter, and preparation of the Annual Report for the health department. The staff are also responsible for planning and implementing in-service programs and workshops with professional people outside the health department (11).

Division of Public Health Nursing

The purpose of public health nursing is to provide family centered nursing service to meet the changing needs of the community through health teaching, demonstration, and assistance to individuals sick or well. The nursing staff perform activities contributing to health and rehabilitation when individuals and families lack the necessary strength, will, or knowledge to do for themselves.

The Division of Public Health Nursing has 33 registered nurses, 15 licensed practical nurses, and 12 nurses' aides on the staff at the present time. This number does not include the nurses that work in the Communicable Disease Control Division (19).

One of the major programs in which the Nursing Division personnel is involved is the Home Care Program which offers bedside nursing in the home with the doctor's written orders. Such care may include irrigation of catheters, teaching patients or family members the technique of giving insulin, changing dressings, and many other services. This program is for people of all ages, those with or without insurance, on Medicaid or Medicare, and other patients who need this type of service.

Another type of program the Nursing Division staff perform is the maternity nursing services. This includes prenatal services, postpartum services, and family planning services. At the present time, the number of prenatal patients receiving services has been reduced. This is partially explained by the fact that all of the high risk prenatal patients, which includes those eighteen years old and under, are seen at Erlanger Hospital and not by the health department nurses.

A large number of family planning patients are seen each month. These services are available to all citizens who do not go to a private doctor. There is no charge for family planning services.

The nursing staff presently spend a large part of their time with the Child Health Program. All children who are eligible for Medicaid services can receive a Medicaid screening test at the public health clinics. The screening test is a physical examination given by a registered nurse, pediatric nurse practitioner, or a physician to find any condition that may not be normal. The patients who are screened by this program are then referred by the public health nurse to the physician for definitive diagnosis and treatment (11).

A Diabetic Screening Program is now in progress which provides a screening test for diabetes for any undiagnosed diabetic. These tests are available at special times at all of the clinics. There is no charge for this service, but donations are accepted.

CHAPTER IV

THE NUTRITION SECTION OF THE CHATTANOOGA-HAMILTON COUNTY HEALTH DEPARTMENT

I. DEVELOPMENT AND ORGANIZATION

History and Organization

In 1964 the Director of the Chattanooga-Hamilton County Health Department created a position for a nutrition consultant. This position was first filled in 1965. Since 1965 the position has been vacant several times, but a full-time nutrition consultant trained in public health has been on the staff from 1972 to the present time.

The Nutrition Section is placed administratively under the Director of the Division of Communicable Disease Control who is also the Director of Medical Services.

Philosophy of the Nutrition Section

A sound public health nutrition program contributes to the improvement of the health status of all members of the community. Therefore, the philosophy of the Nutrition Section is to make nutrition an important part of total health care for Chattanooga-Hamilton County citizens.

Some of the goals of the Nutrition Section are: to improve the community in which we live, work, and play; to narrow the gap between what people know about nutrition and what they practice; to contribute to manpower training in nutrition; and to provide teaching and nutrition

information for health department use, for the general public, and for mass media information (19).

Staff

The salary of the nutrition consultant comes from both state and county funds. The job description for the position of nutrition consultant may be found in Appendix A.

The background of the public health nutrition consultant influences the nutrition services of the health department. The nutrition consultant received her Master of Science in Public Health Nutrition from The University of Tennessee College of Home Economics, Knoxville, Tennessee. Before coming to the Chattanooga-Hamilton County Health Department, she had served in a number of responsible positions in the field of Nutrition. Some of these positions were nutrition consultant to the Team Evaluation Center in Chattanooga, Tennessee, Assistant Professor in Home Economics at George Peabody College for Teachers, Director of Nutrition Services of the Tennessee State Health Department in Nashville, Tennessee, Assistant Director of Nutrition Services for the State of Kentucky, and Director of Nutrition Services for the Arkansas State Board of Health (20).

Because of the nutriton consultant's varied work experience at different levels in the field of public health she has an excellent understanding of the total public health program and how it relates to nutrition services.

II. PROGRAMS AND ACTIVITIES OF THE NUTRITION SECTION

The nutrition consultant is responsible for planning, developing, coordinating and evaluating the nutrition program and correlates the nutrition and dietary aspects with the other divisions in the health department. She plans, develops, and coordinates the nutrition program by evaluating existing services. She implements and directs the nutrition program and provides technical nutrition consultation to professional medical and public health personnel (21).

Ideally, the nutrition consultant would make an attempt to provide direct services to all citizens in the county, but this has to be somewhat limited due to the fact that there is only one public health nutrition consultant in Hamilton County. Because of this fact, the nutrition consultant works through public health personnel and other agency staff by supplying information, consultation, and guidance in programs related to nutrition. An example of this type of service is in-service training for the staff of community agencies and other health department personnel on request.

Due to the large number of persons in need of nutrition services in Hamilton County priorities have been established for high risk or stress groups. These groups include pregnant and lactating women, infants and children, and the elderly as well as individuals with chronic diseases such as diabetes, cardiovascular disease, obesity, infections, errors of metabolism, nutritional deficiencies, and diseases which require modified diets.

The nutritional service is provided through referrals from health department staff, private physicians, and other community agencies.

The following is a brief description of how the nutrition consultant coordinates her program with other divisions of the health department as well as with those of other agencies. The student's observations and activities concerning some of these divisions and agencies in which she had contact during the field experience is provided in Chapter V.

Public Health Nursing

The responsibilities of the nutrition consultant are related to those of the public health nursing staff in many ways. Both disciplines are concerned with the total well-being of the patient and his family. The nutrition consultant works with the public health nurse by providing consultation and resource materials and by providing direct services to the patient referred by the nurse.

A large number of the nutrition consultant's patient referrals come from the public health physicians and nurses. In most new patient referrals the nurse makes the initial home visit to assess the needs of the patient. If she finds that there is need for a more detailed nutritional assessment of the patient or a need for dietary counseling, she then refers the patient to the nutrition consultant.

The nutrition consultant and the public health nurses are both involved in services for the prenatal and family planning patients. At the present time the high risk prenatal patients are seen at Erlanger Hospital and not by the health department nursing staff.

Because of the reduced number of prenatal patients, more emphasis is now being placed on the family planning programs. One project that the nutrition consultant is currently working on is the development of a weight-reduction class for the women receiving family planning services.

Recently there has been a concerted effort on the part of the nutrition consultant and the public health nurses to improve the iron-rich food intake of children with low hematocrits. Special emphasis was placed on this problem after clinical examinations revealed that many of the children who stayed in day care facilities were found to have low hematocrit levels. One of the principal ways that the nutrition consultant assists with this project is by working with the directors and other personnel of the day care centers, Head Start programs, and other care-givers of children. The nutrition consultant's role in working with these centers is discussed later in this chapter.

Environmental Health

The Division of Environmental Health and the Nutrition Section are both interested in the welfare of nursing home patients and children attending day care centers. Recently one of the health educators, the nutrition consultant, and a health department environmentalist planned and presented a program to the food service personnel of various nursing homes in Hamilton County. The nutrition consultant provided information on meal planning and dietary problems of the elderly while the environmentalist emphasized food sanitation during his

presentation. It is hoped that because of the success of this program more classes of a similar nature will be requested.

Lead Poisoning Project

Presently, the staff of the Lead Poisoning Project is planning an intensive lead screening program to take place during the summer months. The Nutrition Section has an important contribution to make in the lead poisoning program. This service should be provided whenever children are found to have nutritional anemia or malnutrition accompanied by positive lead levels. At the present time, more nutrition services are needed in this area.

Health Education

The staff of the Division of Health Education and Information work closely with the nutrition consultant in promoting nutrition education. The nutrition consultant offers consultation services and materials from her nutrition files to the health educators. At the request of the health education staff, the nutrition consultant develops and presents a spot announcement on a local radio station several times a year concerning some aspect of nutrition education. She participates in talks on nutrition to various groups and assists on programs with other health department staff which are coordinated by the health educators. In turn, the health education staff often provide assistance to the nutrition consultant in the form of visual aids and by planning and developing programs for nutrition education.

Branch Health Centers

Prior to June 30, 1972 the nutrition consultant was committed to provide nutrition services to the East Side Health Center two and a half days per week because 50 percent of her salary was funded through a special project at the East Side Center. Since the expiration of the special project, the nutrition consultant has continued in this commitment to the center.

While at the East Side Health Center she provides consultation to the nurses and dietary counseling to patients with nutritional problems who visit this branch health center. She also makes home visits to patients referred to her by the East Side nursing staff and physician.

For almost a year the nutrition consultant has been providing counseling to a group of blind diabetics at this center concerning their diets. Most of the patients have had their diets translated into Braille and can follow along as the nutrition consultant discusses their particular diet with them. This group has been a most receptive group and have shown much improvement in staying on their diet.

Because of the nutrition consultant's commitment to the East Side Health Center, less time is spent at the other centers but cases are followed by referral from other areas.

Coordination of Nutrition Services with Other Agencies

The nutrition consultant must be knowledgeable of the programs and services offered by other community agencies in order to best meet the needs of the people requiring her services. By working with other

agencies, she is also contributing to the coordination and lack of duplication of nutrition services offered by the community.

Several agencies and organizations in Hamilton County are concerned with nutrition services or promoting nutrition education. The nutrition consultant works cooperatively with these agencies and often provides special assistance to them on request.

One avenue through which she does this is by participating in Nutrition Council activities. There are approximately twenty-five agencies represented in the Council. Each agency involved has some nutrition component in its program.

Extension Service. The University of Tennessee Agricultural Extension Service in Hamilton County provides much information to the public concerning food buying and preparation, including basic principles of nutrition. The Extension agents furnish the public health nutrition consultant with printed materials to be used in working with individuals and institutions. The nutrition consultant, in turn, counsels people interested in a modified diet referred by the Extension agents.

Dairy Council of the Appalachians Inc. The purpose of the National Dairy Council and its subsidiaries is to provide health education to the public. Presently, one member of the local Dairy Council staff is a home economist.

The Chattanooga-Hamilton County Public Health Nutrition Consultant utilizes the literature prepared by the Dairy Council whenever

possible in her teaching and consultation to patients. The nutrition consultant and the home economist at the Dairy Council work closely in coordinating community nutrition projects.

The University of Tennessee. By request, the nutrition consultant discusses applied nutrition in public health with the home economics classes at The University of Tennessee at Chattanooga.

Dietetic staff orientation. Recently there have been two requests for public health experience for dietetic staff members of the community hospitals who are working toward meeting requirements for membership in the American Dietetic Association. These staff members are assigned to the Nutrition Section of the health department for one week. The nutrition consultant is responsible for planning an orientation program that provides the staff members with an understanding of the principles of public health nutrition. This orientation includes observation and participation in community nutrition activities.

Hamilton County Department of Public Welfare. One section of the Department of Public Welfare with which the nutrition consultant is involved is the Division of Day Care Licensing. The responsibility of this division is to license individual homes, group facilities, and agencies who provide care for children outside the home on a day basis.

An important contribution that the nutrition consultant makes to the Division of Day Care Licensing is the provision of in-service meetings on nutrition to the staff responsible for licensing day care facilities. Many of these people have had little or no training in

nutrition and occasionally need additional assistance in interpreting the requirements established by the "Standards For Day Care Centers."

Table 2 illustrates the number of centers known to serve children in Hamilton County on an all day basis. Because of the large number of centers, it is impossible for the nutrition consultant to provide direct service to each center. She does try, however, to provide as much direct assistance as her time permits by request.

As a result of these conditions, she concentrates her efforts in developing and presenting programs concerning nutrition to the staff of several agencies at one time. In this manner, she is more effective in providing assistance in solving the nutritional problems of a large number of centers. During the student's field experience the Day Care Supervisor for the Human Services Committee of Chattanooga requested that the nutrition consultant present such a program to the care-givers of children. These are people who care for children in a home setting. The nutrition consultant and the student jointly presented the program.

Resources for Handicapped Children

One of the services offered by the health department nutrition consultant is that of providing assistance by request to the community agencies working with handicapped children. This assistance is in the form of consultation with staff workers or direct services to a child with a particular feeding problem. The most common topics discussed by the nutrition consultant with the staff members are problems which they may be having with meal planning or the mechanical aspects of feeding. The nutrition consultant also provides specific nutrition education

TABLE 2

ALL CENTERS KNOWN TO SERVE CHILDREN ON AN ALL DAY BASIS WITHIN HAMILTON COUNTY, TENNESSEE 1974

Total Centers	Licensed Status
9 Private for Profit	34 Centers Licensed
27 Church Supported	0 Centers Approved
7 Federally Funded	12 Centers Applied
8 Other Non-profit	5 Centers Exempt

Total Child Units in Licensed or Approved Facilities

1934 in Licensed Day Care Centers

0 in Approved Day Care Centers

35 in Licensed Group Day Care Homes

54 in Licensed Family Day Care Homes

4 in Approved Family Day Care Homes

Source: Division of Day Care Licensure 1973 Day Care Resources in Hamilton County. Tennessee Department of Public Welfare, Nashville, Tennessee.

materials that the staff members may use as they work with the parents of the child. All of this information is based on an adequate diet for a growing child whether normal or handicapped.

Some of the feeding problems that the nutrition consultant encounters in working with a handicapped child are his difficulty in sucking, swallowing, chewing, tongue control, or lip pressure. Later on the child may have problems in sitting balance and in the upper extremity control necessary to feed himself (22).

A brief description of the agencies in Hamilton County involved in working with handicapped children and their nutrition related problems is presented.

The Siskin Memorial Foundation. The Siskin Foundation is dedicated to work with the physically handicapped. Patients are admitted to the Foundation regardless of age, sex, race, religion, or ability to pay. There are no geographic boundary lines. All patients must, however, be referred by a physician. Thousands of patients are seen each year by the professional staff in one or more of the departments. Services are offered in physical therapy, prosthetic clinics, child study, dentistry, speech and hearing, and other special clinics. Special psychological services are provided by a staff psychologist.

The center operates a day care for handicapped children. Many of the children at the day care center are totally dependent on someone else for feeding and several of them use special eating tools designed specifically for their particular handicap.

Orange Grove Center for the Retarded. Orange Grove is a center located in Chattanooga designed for the habilitation of the trainable retarded including those with multiple handicaps. Children are accepted at the center as young as six years old and there is no upper age limit. The center serves a multi-state area of approximately sixty miles of Chattanooga with resident clients being served from all parts of the nation (23).

Some of the programs and services offered at the center are: day care program and cottage for the profound mentally retarded, work activity center, developmental center, services for the deaf and services for the blind, a residence program for some of the children, occupational therapy, a summer camp program, and a school program. The vocational section of the center includes a workshop program which provides training and the teaching of simple skills to those capable of holding a job under close supervision. A recently initiated program is an adult day care for those over sixteen years of age who have not progressed past the day care stage.

The children at this center are quite varied in their feeding handicaps and in their stage of feeding development. Because a number of the children have problems with chewing or swallowing, much of the food that is prepared each day must be blended to a fine consistency before being served to these children.

Team Evaluation Center. The Team Evaluation Center in Chattanooga is the regional diagnostic and referral agency. The primary aim of the center is to assist children who may be handicapped to reach

their maximum potential. The Team Evaluation Center is not a treatment center itself but refers children to professional persons, schools, and agencies best able to meet their needs. Although the principal emphasis is on serving children, information and referral services are also provided for adults.

The basic concept of the Team Evaluation Center is the team approach. When a child is accepted for diagnosis at the center he is interviewed and tested by each member of the team. These team members presently include a physician, a registered nurse, social worker, educational diagnostician, and a psychological evaluator. After the child has been seen by each of these team members, a staffing conference is held in which each of the different disciplines give their findings and a common diagnosis of the child's problem and potential is determined. After this conference the child's parents are informed of the findings.

At the present time the Team Evaluation Center does not have a nutritionist on the staff. Because of this, the health department nutrition consultant makes follow-up home visits on request as her schedule permits. This applies only to the children seen at the center with nutritional problems who reside in Hamilton County.

Dawn School for the Handicapped. The Dawn School for the Handicapped is a school which was recently established in Hamilton County. The Dawn School is designed for children who have a physical handicapping condition but have normal mental abilities. The Hamilton County Board of Education pays the salaries of the teachers and provides equipment for the school. The building and maintenance is funded through the

Easter Seal Society. The school has been in operation for only five months and presently has an enrollment of thirty five students. The school has three classrooms. The classes are divided principally according to age groups. Much emphasis is placed on teaching academics at the school. The children are also taught how to use special equipment adapted for the handicapped to assist them in becoming self-reliant.

CHAPTER V

ANALYSIS OF PERFORMANCE IN NUTRITION ACTIVITIES

A valuable part of the field experience for the student was the opportunity for her to analyze her own performance through observation and participation in several types of nutrition activities. Although many opportunities were provided that enabled the student 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 abilities through observation and/or experience. Part II is a detailed description and evaluation of a special project conducted by the student.

I. EXPERIENCES IN NUTRITION ACTIVITIES

Consultation with Professional Workers

Consultation is one of the most common services that a public health nutritionist offers to other professional workers. It is a problem solving process whereby the consultant and consultee work together to increase the knowledge or skills of the consultee. The student was able to observe the nutrition consultant as she worked with other disciplines in the health department and other agencies. An example of this was the student's observation of the nutrition consultant providing consultation to a nurse who, at the present time, is acting dietician at the Siskin Foundation for handicapped children. Later in the field experience the student was able to serve as a

consultant to the food service supervisor for several city day care centers. The student has chosen these two experiences as examples to illustrate her knowledge and application of the consultative process.

The nurse in charge of meal planning at the Siskin Foundation requested the services of the public health nutrition consultant to assist her in planning nutritious snacks for the children which would meet the recommendations of the "Standards for Day Care Centers." These standards are determined by the Day Care Licensure Division of the Tennessee Department of Public Welfare. The Siskin Foundation Day Care Program is unique in that the children have varied handicapping conditions with many of them having feeding problems. Also, the Siskin Foundation Day Care Program is somewhat different from most day care centers in that two different groups of children are at the center each day, one group in the morning and a different group in the afternoon.

The nutrition consultant and the student reviewed recent menu plans. Since all but one child attended the center for only half a day the menus consisted mainly of mid-morning or mid-afternoon snacks. The most common problem which the nurse had was meeting the standards' requirements for a vitamin C food source and occasionally omitting a bread product in the snack. The nutrition consultant made several suggestions of ways that a vitamin C food source could be added to the snack and also suggested a number of nutritious bread products which could be used. The nurse seemed most receptive to suggestions and planned to include them in her future menus. The nutrition consultant offered to take several of the menu plans for review and correction

and to provide materials to assist the nurse in her menu planning. A follow-up visit was made in which the student served as the nutrition consultant.

During this initial visit the nutrition consultant established rapport with the nurse by expressing a genuine interest in the problems of the nurse and by conveying an attitude of helpfulness instead of criticism. This experience allowed the student to observe the nutrition consultant's communication abilities as well as technical skills. Her establishment of a good relationship with the nurse made the student's follow-up visit much more enjoyable and meaningful.

Following this observation, the student served as a consultant to the food service supervisor of five city day care centers. This supervisor lacked a nutrition or home economics background and was having problems with meeting the nutritional standards of the Licensing Division of the Tennessee Department of Public Welfare.

The supervisor was responsible for the meal planning and preparation in all five of the city day care centers. The food for three of the centers was prepared in one kitchen and taken to the centers across the city. Two of the other centers were served by food from another kitchen. Since the majority of the pre-schoolers stayed at the centers all day, the supervisor had to provide food for breakfast, lunch, and an afternoon snack.

The same problems in meeting the requirements for a vitamin C food source in the meals and including an enriched bread product in the afternoon snack were encountered in this consultation. The student

viewed the menu the supervisor had planned for the coming week pointing out discrepancies in meeting the standards for day care centers and explaining why they would not meet the standards.

The student also made suggestions of foods which could be substituted that would meet the requirements and would fit easily into the total meal plan. The supervisor was most receptive to these suggestions and made the necessary changes.

The supervisor and the student then reviewed some of the older menu plans to see if they met the standards so that they could be used in a two month menu cycle plan.

Through both observation and participation in the process of consultation the student gained insight in the importance of developing effective channels of communication, establishing rapport, and showing a genuine interest in the problems of the consultee.

Mass Media

One of the most effective means of communicating nutrition information to the largest number of people is through mass media. Since the public health nutritionist is often presented with the opportunity to participate in radio and television programs and public service announcements, it is important that she develop the skill and self-confidence necessary to be successful in such an activity.

The Chattanooga-Hamilton County Health Department has been most fortunate in receiving cooperation from many of the local radio and television stations for the presentation of public service announcements concerning public health. One of the local radio stations has agreed

in allowing the health department staff to present such an announcement one day per week on any phase of public health education.

The nutrition consultant is responsible for the presentation of short talks involving nutrition education on the radio station several times a year. During the student's field experience she was asked to plan and present one of these announcements on prenatal nutrition.

In planning the announcement the student had to take several things into consideration. One of the first was the length of the presentation. Since the announcement was live and scheduled for four and a half minutes, the written material had to be planned for presentation in exactly that amount of time. The student also had to consider the type of audience to whom she would be speaking. She was informed that the listening audience of this particular station was made up of predominately black people with many having limited formal education. This information was most important in helping the student to plan the presentation in order to be relevant and effective in reaching the majority of the listening audience.

Because of the student's lack of experience in mass media activities she was initially apprehensive of presenting the announcement. As a result of the encouragement given her by the nutrition consultant she was able to gain her confidence and presented the announcement without any problems. She feels that this experience was one of the most worthwhile for her during the field training. It gave her the opportunity to learn effective communication techniques and to become more

self-confident in this area. The student's presentation for the announcement is included in Appendix B.

Professional Conferences

During the student's field experience, three days were spent in Memphis, Tennessee. On the first day the student attended a field staff meeting for the Nutrition Division of the Tennessee Department of Public Health. These meetings are held quarterly for all nutritionists employed in the field of public health in Tennessee. The purpose of the meetings is to provide in-service education to the nutritionists, to assist in coordinating nutrition activities and programs throughout the state, and to provide an opportunity for the exchange of new ideas and techniques in the practice of public health nutrition among all nutritionists in public health within the state.

The student's attendance at this meeting provided her with an excellent opportunity to view the policies and programs of the public health nutrition component on the state level. From this experience she also gained an understanding of the total public health nutrition services offered within the state and the importance of having coordination between the state and local levels concerning the policies and programs of public health nutrition.

On the second and third day the student attended a nutrition symposium sponsored by the Memphia Area Nutrition Council. The purpose of the symposium was to provide nutrition education for a variety of professional and lay leaders, focusing on the consumer, his nutritional needs, problems, and culture, with the aim of influencing the nutrition

status of people in the Mid-South. The symposium consisted of programs presented by eminent persons in the area of nutrition, dietetics, and medicine. Some of the topics discussed at this symposium were nutrition in medical education, nutrition legislation, the Tennessee program for feeding the elderly, food and drug interaction, and nutrition education for ethnic groups. Dr. Grace Goldsmith, former Dean of the Tulane University School of Public Health and Tropical Medicine discussed simple tools which are used for nutritional assessment.

Because of the frequency in which the public health nutritionist encounters problems involving nutrition-related anemia, the student was most interested in the talk presented on this topic. The speaker was Dr. Marion Dugdale who is a professor of hematology at The University of Tennessee Medical Units in Memphis, Tennessee. Dr. Dugdale stated that between 10 and 30 percent of the world's population is iron deficient. She said that usually iron defiency anemia is not detected until all the stores of iron are gone and the blood and tissues are becoming depleted of iron. Another statement that Dr. Dugdale made was that an iron deficient person cannot correct the problem by food alone even though the absorption of iron is increased when the body is deficient. Supplementation must be used.

This experience was most rewarding to the student. It allowed her the opportunity to become acquainted with many of the prominent people in the field of nutrition and their personal viewpoints as to its application. It also increased the student's knowledge in specialized areas of nutrition and made her more aware of the importance of

nutrition in every facet of life. The student's ability to participate in productive conferences of this type was strengthened by this experience.

II. AN ANALYSIS OF PARTICIPATION IN A SPECIFIC SERVICE ACTIVITY

Introduction

The student's specific service activity was to furnish nutrition consultation to a family with multiple medical, social, and economic problems and to develop a nutritional case study of the family. The major objectives of this activity were to assist the family with their varied nutritional problems and secondly, to strengthen the student's skills in home nutrition counseling. The case study which was developed provided a detailed description of the family's situation but did not identify the specific family involved.

The value of a nutritional case study is to give a written account of all aspects which the nutritionist must consider in working with a family. This includes the medical, social, and economic problems of the family as well as their general attitude toward their particular situation. An important part of the case study is the development of a care plan by the nutritionist describing long-term and short-term goals for the family. A description of her specific activities in attempting to attain these goals should also be included. For the nutritionist to be effective in reaching these specific goals she must remember that the nutritional problems of the family can not be isolated from their

other social, economic, and medical problems. Therefore, the nutritionist must consider the interrelationship of nutrition to the other disciplines and coordinate her activities with those of other agencies.

This case study provides a brief discussion of the other agencies involved in rehabilitating this particular family. It also illustrates the nutrition contribution in a coordinated effort on the total health team.

Although this case study describes only the activities of the nutritionist in working with the family, it should be remembered that nutrition is only one facet of the total community health program necessary to help families with multiple problems.

Background Information

This case study involved a four member family residing in a semi-rural area of Hamilton County. The family included a mother and father in their middle forties, a fourteen year old daughter, and a seventeen year old son.

The family's source of income was disability payments from Social Security supplemented by a small payment from Tennessee Department of Welfare's Aid to Dependent Children. The rent that the family paid on their small wood house took the majority of their monthly income. At the time of the student's initial visit they had just begun receiving food stamps which assisted in stretching their monthly allotments. The mother and father both received free medical services through the Medicaid Program.

The economic situation of the household can be attributed largely to medical problems which had beset the family. Three years ago it was discovered that the mother had diabetes mellitus. As a result of not following her diet, it had reached a severe stage resulting in draining ulcers on her legs. Because of the poor circulation in her legs, she was able to walk or stand for only a very short time. This had prohibited much of the activity she was accustomed to. The problem which had been most detrimental to the family's financial status was that the father had been disable to work for over a year due to three cerebral vascular accidents within the last two years. Before these accidents the father earned a substantial income as a heavy machinery operator. Because the family was formerly self-supporting and self-reliant, it had been extremely difficult for them to accept their present social and economic situation.

With the compounding of all their problems, the family had reached a state of despair. At the time of the visit they appeared to be only existing with no real interests or goals for the future. Although there were neighbors relatively close by, the family had somewhat isolated itself from others in the community. The mother and father rarely left the house except by necessity. The teenaged son and daughter attended school at the Vocational Training Center in Chattanooga during the day but did not participate in any social activities outside of school. Both were shy and withdrawn in the presence of strangers.

The public health nutrition consultant became involved with the family through referral from the public health nurse assigned to the case. The nurse had previously visited the family and observed a number of nutrition-related problems. The specific referral was made because of a family member with uncontrolled diabetes, obesity of all members of the family, and the need for suggestions of low cost foods since the family had recently qualified for food stamps.

Problems of Individual Family Members

The following is an outline of the individual family members' medical, nutritional, and educational problems.

I. Father
   - A. Three Cerebral Vascular Accidents (Strokes)
   - B. High Blood Pressure
   - C. Paralysis of Left Arm
   - D. Aid of Cane in Walking
   - E. Observance of Salt Restricted Diet Prescribed by Physician

II. Mother
   - A. Diabetes Mellitus with Superficial Leg Ulcers
   - B. Edema
   - C. Obesity

III. Son
   - A. Obesity
   - B. Learning Disability

IV. Daughter

A. Obesity

B. High Blood Sugar

C. Learning Disability

Care Plan

As part of the case study, the student developed a care plan for the family. This included the short-term goals which she hoped to accomplish during the six week period and also the long-term goals for follow-up by other nutrition personnel. Sections I and II consist of the student's goals for the family as a whole. Sections III through VI provide specific goals for the parents and for the teenagers since their problems were different and needed to be given individual attention.

I. Short Term Goals for Family

A. To stimulate the family's interest in a weight control regimen.

B. To help the family understand the benefits of normal weight.

C. To assist the family in planning more nutritious meals and to improve the food buying pattern of the family.

II. Long Term Goals for Family

A. To assist in the nutritional rehabilitation of the family.

B. To provide an incentive to improve their nutritional status.

C. To improve each family member's general attitude toward self through weight control measures.

D. To assist the family in becoming more self-sufficient by growing a portion of its own food supply.

III. Short Term Goals for Parents

A. To establish the mother on diabetic diet regimen.

B. To stress the importance of a normal diet in the healing of the ulcers on the mother's legs.

C. To help the father understand his salt restricted diet.

D. To stress the importance of weight reduction in decreasing the risk of future cerebral vascular accidents for the father.

IV. Long Term Goals for Parents

A. To provide the incentive for both parents to stay on their respective diets.

B. To assist the mother in completely healing the ulcers on her legs and keeping her diabetic condition under control.

C. To assist the father in regaining his self-respect by improving his physical condition through diet therapy.

V. Short Term Goals for Teenagers

A. To encourage the daughter and son to lose weight.

B. To stress the importance of good nutrition in improving the daughter and son's skin appearance.

C. To assist the daughter in overcoming her shyness in the presence of strangers.

VI. Long Term Goals for Teenagers

A. To assist in preventing social stigma of daughter and son through weight control measures.

B. To provide a means of physical activity and a sense of accomplishment for the teenagers by encouraging them to plant a vegetable garden.

C. To interest the daughter and son in becoming involved in social activities.

Progress Report

On the student's initial visit to the family she was accompanied by the health department nutrition consultant. The student had been informed prior to the visit as to the nutritional problems of the family. Since every member of the family was overweight and the mother was diabetic, the whole family had been put on a 1200 calorie diabetic diet. After the student was introduced to the family the nutrition consultant and the student weighed each member of the family. The purpose of weighing the family was to have their initial weights at the beginning of the student's participation and also to serve as an incentive by showing them how much they had lost on later visits. The student then counseled the daughter and son while the nutrition consultant talked with the parents about their diet. The student began her discussion with the teenagers by taking a 24-hour food-intake to learn of amounts usually eaten and food acceptance at meals. This food-intake report indicated that both had been eating too many bread products and

not following the suggested weight reduction regimen. The present diet was reviewed with them to see if they understood the changes that had to be made in their eating pattern. Two pamphlets on weight reduction designed to be used with overweight adolescents were left as their meal guide. On this visit the daughter and son were quite shy and uncommunicative, speaking only when asked a direct question. The student concluded her visit and informed the family that she would be making visits every week for six weeks to assist them with their diet.

During the second visit with the family the student discovered that every member of the family had lost weight. This gave the student an opportunity to express her joy at their weight loss. The student introduced a weight chart which the family could use to plot their weight gain or loss each week. This provided an added incentive for further weight reduction. The student then talked with each member of the family concerning any questions they had about their respective diets.

The weighing session during the third visit revealed that the family had not stayed on their diet as well as on the previous visits. The father had gained weight and reported during the 24-hour food-intake that he had not followed the salt restricted diet prescribed by his physician. The student was most concerned by this and placed emphasis on helping the father understand his diet during this visit. The student also left a sample week's menu and market order with the family which she had prepared at the request of the mother.

On the fourth visit the mother informed the student that her oven had broken and she had to cook everything on the surface units. This presented a problem by limiting the number of foods that she could prepare. The student offered to bring her recipes which are prepared on the top of the range until the oven could be repaired. During this visit the student also offered to provide seeds for the family if they were interested in planting a vegetable garden. It was suggested that the daughter and son could sow and care for the garden since the parents were unable. The family appeared enthusiastic at this suggestion. During this visit the student found that all but one member of the family had lost weight. She encouraged them to continue with their progress.

The fifth visit was not as rewarding for the student as the previous visits. The family had just received their food stamps a few days before and had bought a number of foods not recommended on their diet. As a result of this, the entire family had gained weight. The student spent a great deal of time on this visit explaining why this could be detrimental to their health. The student was encouraged though by the fact that the daughter and son had planted their garden during the previous week.

On the sixth and final visit to the family the student discovered that they had all lost weight. The student praised each of them and encouraged them to continue on their weight reduction plan. The student answered all their questions concerning their diet and plotted their present weight loss on the graphs. The family was very proud of their

total weight loss and the progress they had made with the vegetable garden. They expressed their gratitude to the student for her interest and assistance during the six week period.

Community Agency Involvement

The Chattanooga-Hamilton County Health Department was involved with the family through the public health nurse and the nutrition consultant. The nurse was referred to the family through the Chronic Disease Medicaid Program. She made regular visits to the family to assist them with their chronic medical problems.

Staff from different divisions of the Tennessee Department of Public Welfare had been involved with this family. The family received Aid to Dependent Children and therefore, the family was assigned a caseworker from this division. The Homemaker Service of the Department of Public Welfare provided assistance to the family for a few weeks after the mother's release from the hospital. This service was provided because the mother was unable to perform her usual household duties and could not afford to hire household help. As has been mentioned earlier, the family received food stamps which is also a concern of the Department of Public Welfare.

The caseworkers from Vocational Rehabilitation were concerned with different members of the family. The caseworker involved with the adults in the family was referred by the Homemaker Service to assist in rehabilitating the mother. The teenagers' caseworker was referred to the family through the Vocational Training Center where

the children attend school. Although the caseworkers had special interests, both were concerned with the rehabilitation of the entire family.

A private physical therapist worked with the father for several weeks after his most recent cerebral vascular accident. The services of the physical therapist were funded through the Medicaid Program.

The mother and father received medical services at Erlanger Hospital in Chattanooga. The father attended the Medical Outpatient Clinic regularly and the mother was scheduled for monthly appointments at the Diabetic Clinic. Both clinics are services offered by the hospital.

As was mentioned earlier, the parents were eligible for and received free medical services through the Medicaid Chronic Disease Program. This provided a great deal of assistance in the total medical rehabilitation of the family.

The South East Region Public Health Dental Division had been contacted regarding the provision of dental services for the father in this family.

The Social Security Administration provided disability payments to the father. This was the main source of income for the family and had been since the father became completely disabled to work.

Interagency Cooperation

In a situation where several community agencies are providing assistance to the same family, it is important that each agency be

made aware of the activities of the other agencies involved. This is necessary to avoid duplication of services and to be most effective in assisting the family.

During the student's involvement with the family she placed a great deal of emphasis on finding out exactly which agencies were working with this particular family and how she could contribute to interagency involvement. The specific agencies assisting the family have previously been described.

After the student's second visit with the family she planned a conference with the public health nurse assigned to the case. The purpose of this conference was to share with the nurse the progress she had made with the family and to gain background information about the family from the nurse. During the six week period the student had two conferences with the nurse to keep her informed as to the progress of the family and the activities of the nutrition component.

The student also scheduled a conference with the Vocational Rehabilitation caseworkers involved with the family. This conference was most beneficial to the caseworkers and the student for it allowed an opportunity for each person to relate his activities to those of the other members involved. The caseworkers were quite pleased at the progress the student had made with the family and contributed information to the student concerning the social and educational problems of the teenagers. This conference established a pathway for communication between these two agencies and provided the student an opportunity to observe the role of another agency in the rehabilitation of the family.

During one of the student's visits to the family, the mother expressed concern about the condition of the father's teeth since it was causing feeding problems. She requested that the student investigate the possibility of receiving dental services through the Medicaid Program. The student contacted the South East Region Public Health Dental Division to find out if the father was eligible for dental services. The student was informed that he could not receive dentures through this program, but was eligible for other dental services. The father was pleased to learn of these services being offered.

Although time did not permit the student to contact all of the agencies working with the family, she learned from this experience the benefit of the interagency approach for all persons involved.

Evaluation and Conclusion

The student was presented with a number of new and worthwhile experiences while providing consultation to this family. This special activity allowed the student the opportunity to develop nutrition expertise in counseling a family with multiple health problems.

The student was confronted by many conditions of the family which had to be taken into consideration in the initial diet planning. Some of these conditions were: carbohydrate restriction of all family members, salt restriction of the father's diet, lack of understanding of the diabetic diet, limited cooking facilities, and the need of low calorie economical foods. These conditions presented a real challenge to the student in diet planning and counseling.

The student felt she was most successful in working with the daughter and son in the family. They seemed to respond to the student and she was able to establish rapport with them after only two visits. This was due to the student's ability to relate to their age group and the use of informal person-to-person contact. The daughter and son were very conscientious in following the weight reduction plan. Both of the teenagers lost weight during the six week period. Figures 2 through 5 illustrate the individual weight gains or losses of the family members.

The areas in which the student felt she was less successful were in convincing the father to follow the weight reduction diet and in keeping the mother on her diabetic diet. Although the mother lost three pounds during the six week period, this was not always in accordance with her diabetic diet plan. These areas of weakness made the student more aware of the constant need for developing skills in motivating people and reinforcing their desire for improvement.

The development of the nutrition case study served as a learning experience for the student as well as providing a teaching tool for the nutrition consultant at the health department. This can be used by the nutrition consultant as an example of a case study for in-service training in public health nutrition and nursing.

Through planning and developing the nutrition case study, the student improved her ability to evaluate and thereby, to strengthen her performance in counseling families with multiple problems. The development of the case study also provided the student the opportunity to

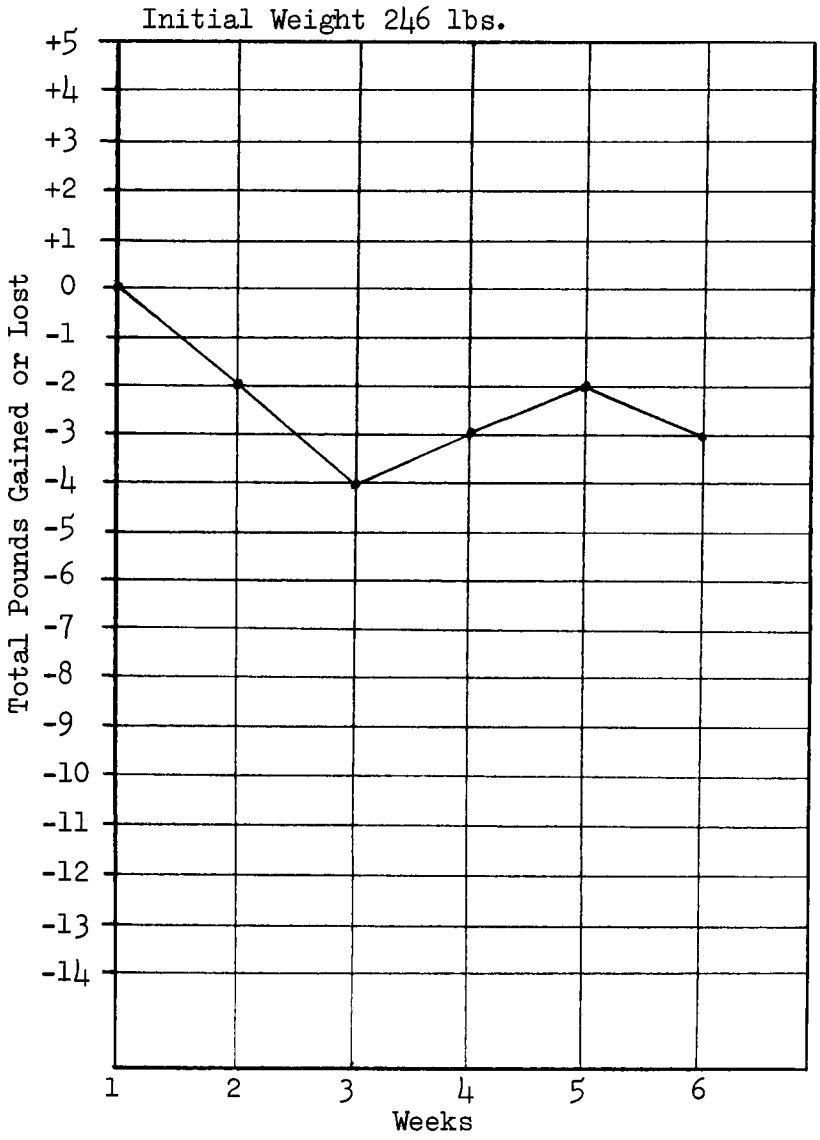


Figure 2. Mother's weight losses or gains during six week period.

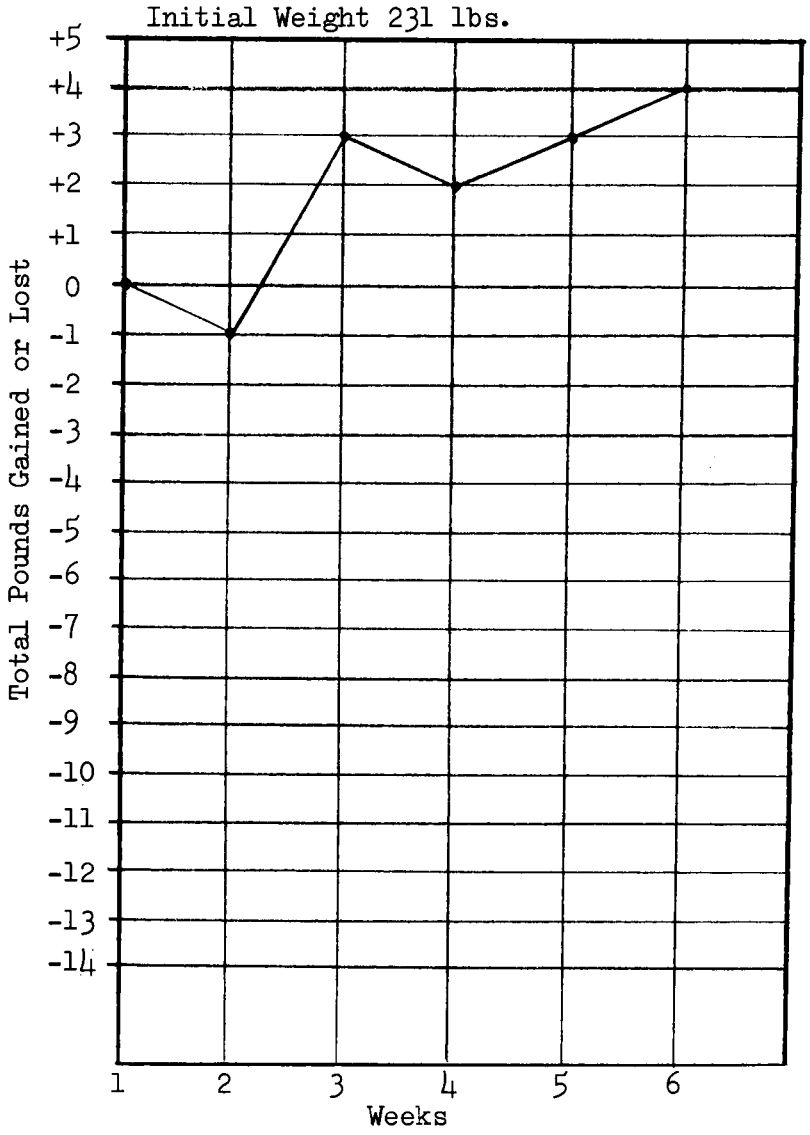


Figure 3. Father's weight losses or gains during six week period.

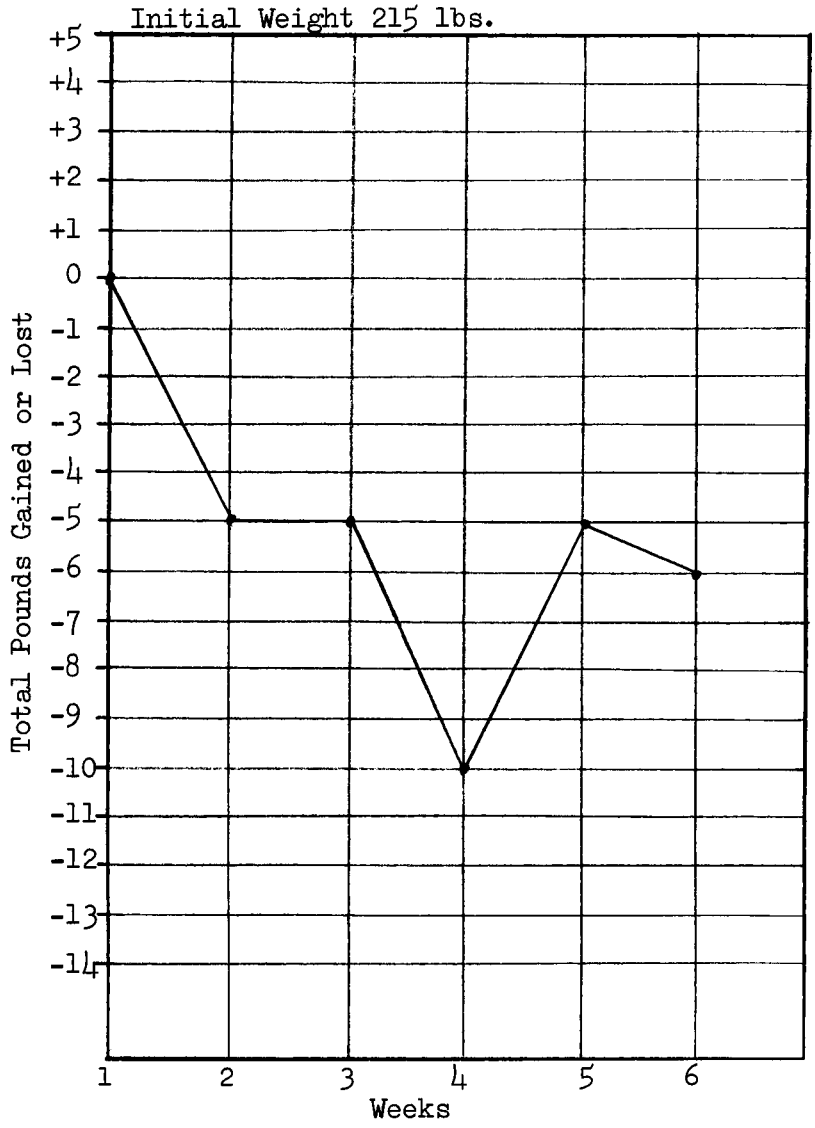


Figure 4. Daughter's weight losses or gains during six week period.

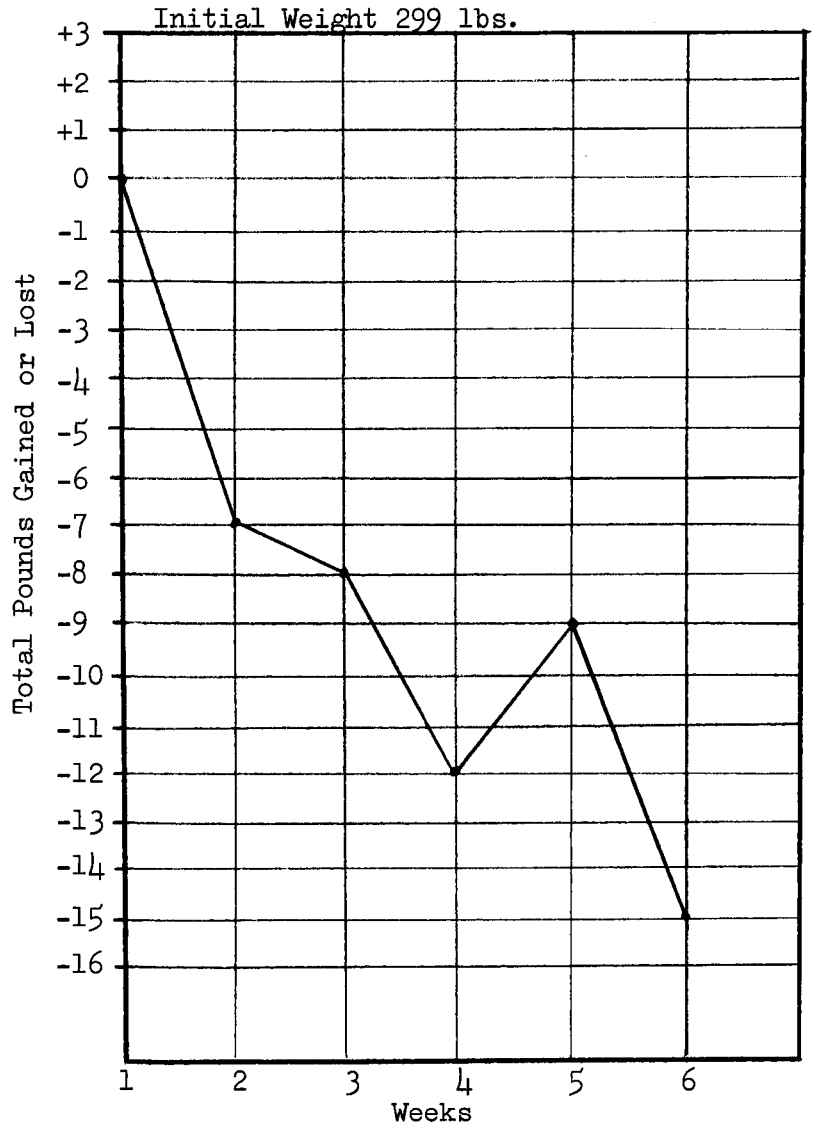


Figure 5. Son's weight losses or gains during six week period.

acquire a deeper insight into the role of the nutrition component in relation to the other health disciplines.

The special project was most beneficial to the student in contributing to her professional development and making her aware of the time and effort required to carry out an effective nutrition program.

CHAPTER VI

SUMMARY AND EVALUATION

The seven weeks field experience gave the student a comprehensive orientation to the Chattanooga-Hamilton County Health Department. The student's predetermined objectives were successfully accomplished through the observations and experiences planned for her by the nutrition consultant at the health department.

The experience provided the student with an overview of the total county public health program with emphasis given to the contribution of the nutrition component in this program. The student's observations and participation in nutrition activities allowed her the opportunity to assess the needs of the community and to develop an understanding of the role of the public health nutritionist in meeting these needs.

The field experience was planned to develop and strengthen the student's skills in areas in which she was weak. Prior to the field training the student had limited experience in providing individual dietary counseling. The field training provided many experiences which enabled her to improve her professional skill and competence in this area. Consultation with professional and nonprofessional groups also provided her with self-confidence in her ability to deal with people.

The student was able to implement her knowledge of program planning, developing, and execution through her participation in the special service project and involvement in the development of other nutrition projects.

The field staff meeting of the Nutrition Division, Tennessee Department of Public Health, provided the student with an understanding of the administrative organization of the nutrition services within the state. It also made her aware of the necessity of administrative coordination in planning and providing successful public health programs on both the state and local levels.

The field training allowed the student the opportunity to implement the academic theories and principles she had previously acquired and has immeasurably improved her self-confidence as a public health nutritionist. The student also learned that continuous self-evaluation is an important part of professional growth and development. The field experience has provided the student with a solid foundation upon which to continue to build toward her future role as a practitioner of public health nutrition.

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APPENDICES

APPENDIX A

CURRENT JOB SPECIFICATIONS FOR NUTRITION CONSULTANT,

STATE OF TENNESSEE, 1974

PUBLIC HEALTH NUTRITION CONSULTANT

General Character of Duties

DEFINITION: Under the general administrative direction of the Director of the Bureau of Personal Health Services and functional direction of the Nutrition Section. The Public Health Nutrition Consultant is involved in highly responsible nutrition work at the state level; assisting the Director of the Nutrition Section in the areas of program planning and evaluation and training and serving as a consultant to state-wide public health programs. In conjunction with the Director and state staff, she is responsible for planning, developing, coordinating and evaluating the nutrition program and for interrelating the nutrition program with other public health programs.

EXAMPLES OF DUTIES: (Note: These examples are intended only as illustrations of the various types of work performed. The omission of specific statements of duties does not exclude them from the position if the work is similar or related.) Plans, organizes, and coordinates state-wide nutrition programs; provide consultation to regional and local nutritionists, medical personnel at the state level, and to specialized health programs; prepares, reviews and selects nutrition educational materials for distribution; plans, develops and conducts professional training programs on a state, regional, or local basis; plans and assists the regional nutritionists in conducting studies and surveys on the relationships of dietary factors to health and disease, the incidence of nutritional deficiencies, and other related areas; designs and prepares plans and proposals for special projects, and short and long term training programs to develop new services to improve and extend nutrition services as part of the overall state-wide public health services; interprets available nutrition services to related state agencies and professional organizations, and maintains cooperative relationships with a variety of state agencies and professional organizations; reports and summarizes activities and progress at regular intervals; performs related work as required

Minimum Qualifications

EDUCATION AND EXPERIENCE: (1) A master's degree in nutrition, community nutrition, public health nutrition, or other related area;

(2) Successful completion of an approved dietetic internship and registration in the American Dietetic Association; (3) Two years of experience in public health nutrition or the equivalent.

The above qualifications express the minimum standards of education and experience of an applicant for this class. Other combinations of education and experience, if evaluated as equivalent, may qualify an applicant for consideration.

KNOWLEDGE AND ABILITIES: Considerable knowledge of the principles and practices of dietetics and nutrition and its relationship to health and disease; considerable knowledge of the field of nutrition as it relates to public health practices; considerable knowledge of principles of public health practices and administration; knowledge of the principles of supervision and consultation; ability to plan and evaluate nutrition programs; ability to communicate effectively, both orally and in writing; ability to plan and organize work effectively and independently; ability to establish and maintain effective working relations with the public and agency staff.

RELATIVE WEIGHTS OF EXAMINATION PARTS:
Education and Experience, 10.

APPENDIX B

PUBLIC SERVICE ANNOUNCEMENT ON PRENATAL NUTRITION

Hello, I am Barbara Siegel, a graduate student in Nutrition, presently working with the Chattanooga-Hamilton County Health Department. Today our topic is on nutrition for the mother-to-be.

The food you eat while you are pregnant is more important than ever before. If you eat the right kinds of food before, during, and after your pregnancy you will feel better, look better, be less likely to have complications during your pregnancy, and have a quicker recovery from childbirth. Besides this, you will be more likely to have a strong healthy baby. While you are pregnant you are furnishing the body building materials for a healthy baby. Your baby's bones, teeth, skin, muscles, and blood are all built from the food you eat. While you are pregnant, you must be careful to eat foods needed daily for your own well-being and for the health of your baby.

It's not really hard to have a good diet during pregnancy. To do this it is important to have a varied diet made up of plenty of meat or meat substitutes, that is, food that belongs in the protein group. Also, you need plenty of milk, eggs, fruit, vegetables, butter, bread, and cereals.

You should be sure to include one of the following fruits that are good sources of vitamin C in your diet everyday. Some of the best ones are: oranges and orange juice, grapefruit, tangerines,

cantaloupe, watermelon, blackberries, tomatoes, and tomato juice. There are also many other fruits that can be eaten that are good for you such as apples, bananas, grapes, and raisins.

During your pregnancy you also need three or four servings of vegetables everyday. Some of the vegetables that are particularly good to eat during this period are: cabbage, turnips, carrots, lettuce, beets, okra, green beans, and greens of all kinds.

It is also important to eat three servings of bread or cereal a day, but not more than four servings from this group. Under this group are included such common breads as corn bread, biscuits, and crackers, but also foods that you might not always think of as a bread or cereal such as potatoes, spaghetti, corn, grits, and rice.

Two groups of foods which are especially important to eat during your pregnancy are foods from the meat and milk groups. These foods are the ones which are high in protein which provides the building blocks for your baby's development. That is why it is so important to have these foods everyday during your pregnancy. Several of you may have a problem with gaining too much weight during your pregnancy. Therefore, it is a good idea to eat lean meats or meat substitutes. In this group you need to eat two or three servings everyday. Foods in this list are eggs, liver, kidney, hamburger, stew meat, pork, chicken, and fish. When you do not have any of the foods listed above, occasionally you may eat four tablespoons of peanut butter for one helping, or one cup of dried beans or peas for one helping of the meat group.

As I have mentioned, milk is very important during your pregnancy. You need to drink three or four jelly size glasses of milk everyday. If you just can not drink whole milk, then you can swap out skim milk, buttermilk, or chocolate milk for some of the whole milk.

During pregnancy, many women have a problem with becoming anemic from too few iron rich foods in the diet. If you find this to be your problem it would be quite helpful to include some of the iron rich foods in your diet everyday. Some of the best ones are liver or any of the organ meats, prunes, raisins, eggs, green vegetables, peaches, and dried peas and beans.

Some of the problems women have during pregnancy can be changed by their diet. Many women have a problem with nausea or morning sickness early in their pregnancy. Slight changes in food habits can often relieve the discomfort of nausea. Some of these are eating small frequent meals, eating foods of dry consistency, and eating foods that are easily digested. Examples of these foods are soda crackers or dry toast. Also it often helps to drink liquids between meals instead of with your food.

In concluding, remember to see your doctor as early as possible in your pregnancy and eat foods from each of the four food groups each day for the well-being of yourself and your baby.

Your Chattanooga-Hamilton County Health Department cares about your health. Bye now, have a good day.

VITA

Barbara Roberson Siegel was born December 29, 1949 in Birmingham, Alabama. She graduated in 1968 from Phillips High School, located in Birmingham, and received her Bachelor of Science degree in Home Management and Family Economics from Auburn University in December of 1971.

In December, 1971 she was married to Barnett S. Siegel and moved to Knoxville, Tennessee. She was employed as a substitute teacher with the Knoxville City Schools from January to June of 1973.

She entered the Graduate School of The University of Tennessee in June of 1973 to work toward a Master of Science degree in Nutrition.