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To the Graduate Council:

I am submitting herewith a thesis written by Margaret Susan Hambright entitled "Nutrition Field Observations and Experiences in the State of Colorado." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science, with a major in Nutrition.

Mary Nelle Tranfor
Major Professor

We have read this thesis and
recommend its acceptance:

Mary Rose Gross

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Accepted for the Council:

Dean of the Graduate School

NUTRITION FIELD OBSERVATIONS AND EXPERIENCES IN THE STATE OF COLORADO

A Thesis

Presented to

the Graduate Council of

The University of Tennessee

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

Margaret Susan Hambright

August 1965

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M. S. H.

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CHAPTER I

INTRODUCTION

This report is based upon experiences and observations of the student during a seven weeks' period of field training with the Colorado State Department of Public Health. The Senior Nutrition Consultant of the Maternal and Child Health Section in the Child Health Services Division provided the guidance for the field experiences. Approximately five weeks and two days were devoted to working with the Senior Nutrition Consultant at the state health department. One week was spent in the Denver City-County Health Department with the health educator who planned experiences emphasizing environmental health and nursing services of the local department. Three days were spent visiting the Western Slope of Colorado to observe Hearing and Orthopedic Clinics, and one day was devoted to observing the dietary consultant in her program.

The purpose of the field experience was to supplement the student's academic training in public health nutrition at The University of Tennessee and to broaden her concept of public health work at the state and local levels. The specific objectives of the student were (1) to study the organization, administration, and functions of an official health agency; (2) to gain an understanding of how a state nutrition program is planned and executed to meet the needs of the people served; (3) to learn how nutrition is integrated with the programs and services of other disciplines in the public health agency; and (4) to recognize the contributions of community

agencies and organizations in the development of the overall nutrition program.

Various activities were arranged to help the student accomplish these objectives. During academic study, data were gathered by the student about the state and its health programs by reading the Colorado State Department of Public Health's Biennial Reports for 1960-1961 and 1962-1963. Other pamphlets and booklets published by the state health department and other stage agencies were read to obtain descriptive information about the state.

On the basis of information regarding the background of the student provided by the University of Tennessee, the Senior Nutrition Consultant planned field experiences in the State of Colorado. Since there was only one nutrition consultant at the time of field training, most of the student's time was spent observing and working with the Senior Nutrition Consultant in the state health department. Nutrition activities were observed in health clinics, in planning sessions with other disciplines within and outside the state health department, in an evaluation session with the Children's Bureau Regional Nutrition Consultant, and in staff meetings.

The student read activity reports and nutrition program plans written by the nutritionist to gain more knowledge about the nutrition program. State publications and statistical information were read to learn more about the Colorado State Department of Public Health and the population characteristics of the state.

Conferences were arranged with staff members from several divisions and sections in the state health department. The student also visited and had conferences with personnel at many of the local community agencies and organizations.

The week spent with the Denver City-County Health Department emphasized the direct services offered from a local health agency. The student made field visits with sanitarians and public health nurses. Since this local health department is located in a building joining the Denver General Hospital, the student was shown the facilities available at this institution. Time was spent observing the activities of the clinic and therapeutic dietitians in their daily routine.

Throughout the seven weeks the student recorded daily the information gained through observations, meetings, readings, and conferences. It was impossible to explore the entire health program in the limited period of time; therefore, an attempt is made to describe herein only the nutrition program emphasized during the field experience.

The information obtained during field training is summarized and presented in the following four chapters of this report. In Chapter II, The State of Colorado, some of the relevant facts concerning the state's history, geography, economy, and health statistics are discussed. In Chapter III, the Colorado State Department of Public Health, is presented the history, organization, and function of this official agency. Information regarding the history, administrative placement, and organization of the Nutrition Service is discussed in Chapter IV, The Nutrition Service.

In Chapter V, Nutrition Activities, specific programs providing nutrition services to the consumer are considered. These activities are subdivided into nutrition services included in programs of the Child Health Services Division, programs of other divisions in the state health department, and cooperative services with other community agencies and organizations. In the Summary and Evaluation, Chapter VI, the field experience is reviewed in terms of the objectives stated in the introduction.

CHAPTER II

THE STATE OF COLORADO

Before trying to interpret the nutrition services offered by a state health department, one should have some understanding of the people in that state and of the geographical area in which they live. Statistical health data, which contribute information as to the health status of the residents, provide additional information which must be considered in planning a nutrition program which will meet the needs of the people.

Colorado entered the Union in 1876 as the thirty-eighth state. It was called the "Centennial State" in honor of the one-hundredth anniversary of the signing of the Declaration of Independence (1). Boundary states are Nebraska and Wyoming to the north, Kansas to the east, Utah to the west, and New Mexico and Oklahoma to the south. Colorado, the Spanish word for ruddy, is the eighth largest of all the fifty states. Forming an almost perfect rectangle, Colorado's extreme width, east and west, is 387 miles, and its height from north to south measures 276 miles. Its area of 104,247 square miles is greater than that of New York, New Jersey, and Pennsylvania combined. The mountainous terrain of the Western Slope rises in sharp contrast to the flat or rolling plains of eastern Colorado. Lowest elevation, 3,350 feet, is near Holly in southeastern Colorado with the highest point of 14,431 feet at Mount Elbert. Of the state's 66,718,080 acres, 36 per cent is federal land, a large portion being national forests, parks, and monuments (2).

Riches stored in the mountains include more than 250 metallic and non-metallic minerals. Colorado's hills and plains contain uranium ore, the world's greatest oil shale and molybdenum deposits, gold, silver, huge oil pools, and the nation's greatest coal reserves. Colorado has produced 80 per cent of the world's vanadium and half its radium. The Lincoln Memorial and the Tomb of the Unknown Soldier in Washington, D. C., are made from Colorado marble (2).

Colorado's climate is dry with cool summer nights and mild winters, particularly in the cities and towns lying just east of the front range of mountains, which serves as a protective barrier. The sun shines in Colorado more than 300 days each year. Annual precipitation varies from seven to twenty-six inches in various sections of the state (2).

The cultivation at high altitudes of celery, head lettuce, cantaloupes, peaches, cherries, pears, and other fruits and vegetables produces crops of fine quality and excellent flavor. Colorado ranks high in the production of sugar beets and beet sugar. Other important crops are wheat, corn, beans, potatoes, barley, cabbage, hay, and alfalfa. The grazing of cattle and the fattening of cattle for market are major industries, as is the raising of hogs and poultry. The state's total farmland covers 37,000,000 acres of which 3,000,000 are irrigated by water from the Rockies (2).

Colorado was the roaming ground of many Indian tribes including the Cheyennes, Arapahoes, and Utes. The Indian influence is still prevalent as reflected in the names of many towns and counties in the state (1).

The first permanent white settlements were made in the San Luis Valley in the south central portion of Colorado. Many settlements in this region were established by pioneers from New Mexico. Spanish blood still predominates in several counties of southern Colorado where mountains and rivers have Spanish names (1). According to the Director of the Vital Statistics Section, approximately 9 per cent of the state's population is Spanish-American.

Denver, founded in 1859, became Colorado's capital city by vote of the people in 1881. Known as the Mile High City because of its altitude of 5,280 feet, Denver, with the surrounding metropolitan area, has an estimated population of 1,000,000 or 54 per cent of the current population of the entire State of Colorado (1, 3, 4).

According to estimates of the United States Bureau of Census, Colorado ranked thirtieth in population among the fifty states in 1963 with 1,926,000 persons. During the three years 1960-1963, Colorado's population increased by 9.8 per cent with 51.7 per cent of the increase as a result of net migration into the state. Within the state 80 per cent of the population resides in ten of the sixty-three counties. All of the ten counties, except one on the Western Slope, lie at the foot of the eastern side of the Rocky Mountains (4).

Of the total state population, 46,224 are under one year of age and 721,684 are twenty years of age or under (5). The total births in 1963 numbered 42,179, a rate of 21.9 per 1000 population, which is the lowest rate in Colorado since 1945 but which is slightly above the

national rate of 21.7 (4). Continued rates of increase are expected and anticipated, indicating the need for expanded public health programs to meet the demands of a growing, young population (5).

According to the 1960 census the median age of the state's population was 27.9 years, slightly below the median age of 29.9 years for the United States. The proportion of Colorado's population sixty-five years and over was 9 per cent compared with 9.2 per cent for the nation (4).

With an increase in population the death rate decreased from 8.5 deaths per 1,000 population to 8.4 in 1963, which is below the national rate of 9.6 per 1,000 population. The ten leading causes of death in 1963 in the order of their prevalence were as follows: heart disease, malignant neoplasms, vascular lesions of the central nervous system, accidents, influenza and pneumonia, diseases of early infancy, suicide, arteriosclerosis, other diseases of the circulatory system, and emphysema (6). Colorado's death rates from chronic disease are considerably below the national rates. However, the death rates in Colorado from accidents, influenza and pneumonia, diseases of early infancy, suicide, and congenital malformations are higher than the national rates. This, in part, is because of Colorado's younger population (4).

The incidence of prematurity (birth weight 2,500 g. or less) has remained fairly constant at approximately 10 per cent over the past few years. In 1963, 10.3 per cent of all births were premature, which is above the national average of 8.2 per cent. Among the lower socio-economic groups, the incidence runs close to 20 per cent. Over 65 per

cent of the infants who died in 1963 were premature by birth weight; 78 per cent of the infants who died within the neonatal period were premature. Malformations were also a significant cause of infant death. The 1963 infant death rate in Colorado was 26.0 which was above the 1962 rate of 25.2 and above the 1963 national rate of 25.2 (4). Table I contains a summary of selected health statistics, comparing Colorado with the United States.

Each year an estimated domestic agricultural population of 21,300 comes to Colorado, some following crops around the state while others come for a short season or a particular harvest. They migrate from different parts of the country and from different cultural and racial backgrounds from the Midwest and South. Spanish-speaking workers come from Texas and New Mexico, Sioux Indians from South Dakota, and Navajo Indians from Arizona. These mobile populations, with an average $900.00 annual income per family, produce public health problems related to environmental health, medical care, and nutrition (7).

According to the Director of the Vital Statistics Section, the mean family income for Colorado was $5,780 in 1959, as compared with the United States' national average of $5,660. In this same year 80,000 families, or 18.3 per cent, had a yearly income under $3,000.

Information concerning the socio-economic and health status of the residents, which helps to identify health problems with nutrition components, provides guide lines for the nutritionist in her program planning. To meet the needs of the people of Colorado, shifts of emphases may be necessary.

TABLE I

COMPARISONS OF STATISTICS BETWEEN COLORADO AND THE UNITED STATES, 1963

	Birth Rate*	Death Rate*	Infant Death Rate**	Prematurity Rate***
Colorado	21.9	8.4	26.0	10.3
United States	21.7	9.6	25.2	8.2

*Birth and death rates are based upon 1,000 population.

**Infant death rate is based upon 1,000 live births.

***Prematurity rate is based upon 100 live births.

CHAPTER III

THE COLORADO STATE DEPARTMENT OF PUBLIC HEALTH

The history of the Colorado State Department of Public Health dates back to 1876 when the territorial legislature passed an act establishing the Territorial Board of Health. This nine-member board, appointed by the Governor of Colorado Territory, was given the responsibility of supervising the interests of health and life of the citizens of the territory. After Colorado's admission to the Union, an act was approved on March 22, 1877, to establish a state board of health consisting of nine members appointed by the governor with the same responsibilities as in the 1876 act. Additions and amendments to the original act were made in succeeding years (8).

In 1947, a major act was passed which is commonly known in Colorado as the "Sabin Health Bills." This title was given in recognition of Dr. Florence Sabin, eminent teacher, scientist, and public health leader, whose fight for adequate health laws resulted in "The State Department of Public Health's Reoganization Act of 1947" (9). This legislation provides the basic framework for current organization of the public health department in Colorado.

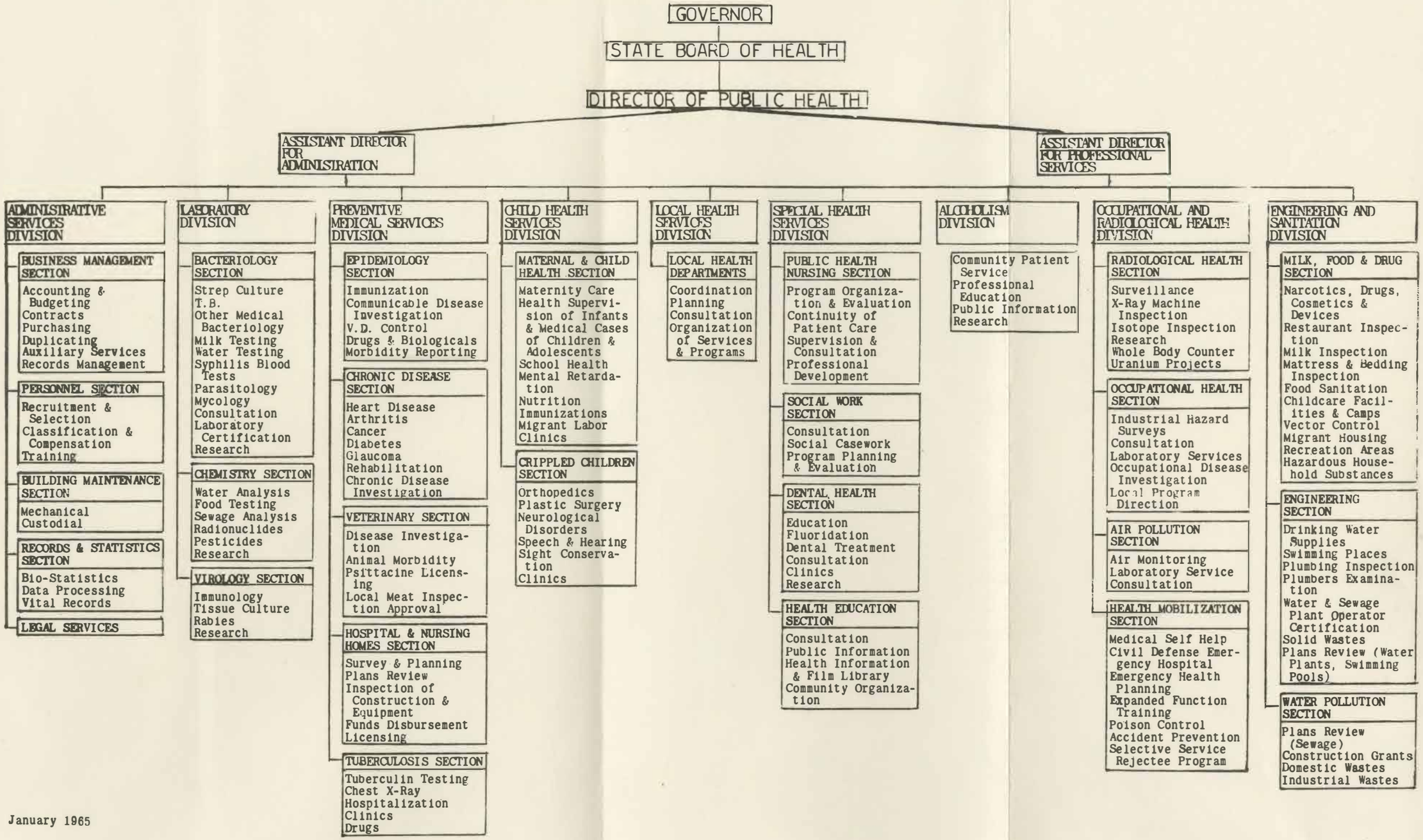
The Governor of Colorado is the administrative head of the Colorado State Department of Public Health which consists of the State Board of Health and the Division of Administration. The nine-member State Board of Health consists of two members selected from each congressional

district and one member at large. These members are appointed by the governor with the consent of the senate. Three appointments are made every three years to stagger the terms of office. Appointments are made to the board so that no business or professional group shall constitute a majority (10).

The Colorado State Board of Health has the following powers and duties: (1) to determine general policies to be followed by the Division of Administration in administering and enforcing the public health laws and orders, standards, rules, and regulations of the board; (2) to act in an advisory capacity to the director on all matters pertaining to public health; (3) to establish within the Division of Administration the necessary sub-divisions or sections for the efficient administration and enforcement of the public health laws or the orders, standards, rules, or regulations of the board; (4) to issue from time to time orders, to adopt rules and regulations, and to establish standards as the board may deem necessary or proper to carry out the provisions and purposes of the Reorganization Act, and to administer and enforce the public health laws of the State of Colorado (10).

The Division of Administration includes the office of the executive director of the state health department and all offices and employees of the sections and divisions of the state health department. Figure 1 shows the organizational chart which outlines the placement of the nine divisions and twenty-seven sections in the Colorado State Department of Public Health.

COLORADO STATE DEPARTMENT OF PUBLIC HEALTH



January 1965

Figure 1. The Organizational Chart of the Colorado State Department of Public Health, 1965.

The administrative and executive head of the Division of Administration is the executive director, or health officer, of the Colorado State Department of Public Health. He is appointed by the board and must have the following qualifications: (1) a degree of doctor of medicine from an approved medical school; (2) at least one year of graduate study in a school of public health; (3) not less than three years experience in administrative practice as a full time public health officer (10). The present health officer, Dr. Roy L. Cleere, appointed at the age of twenty-nine, has served in this capacity for the past thirty years, which is the longest span of service of any state health officer in the United States to date (11).

Two assistant directors function under the executive director. The administrative assistant has a master of science degree while the assistant director for professional services holds a doctorate of medicine in addition to a master's degree in public health (6).

As the official health agency, the state health department serves in a consultative capacity to local health authorities in an effort to help them determine and meet the health needs of their community. It renders services directly to citizens in those counties with no functioning local health agency and when such services cannot be provided practically and economically by local health departments.

At the present time there are twelve local health departments serving twenty counties, representing 85 per cent of the total population. Figure 2 illustrates the location and names of the directors of

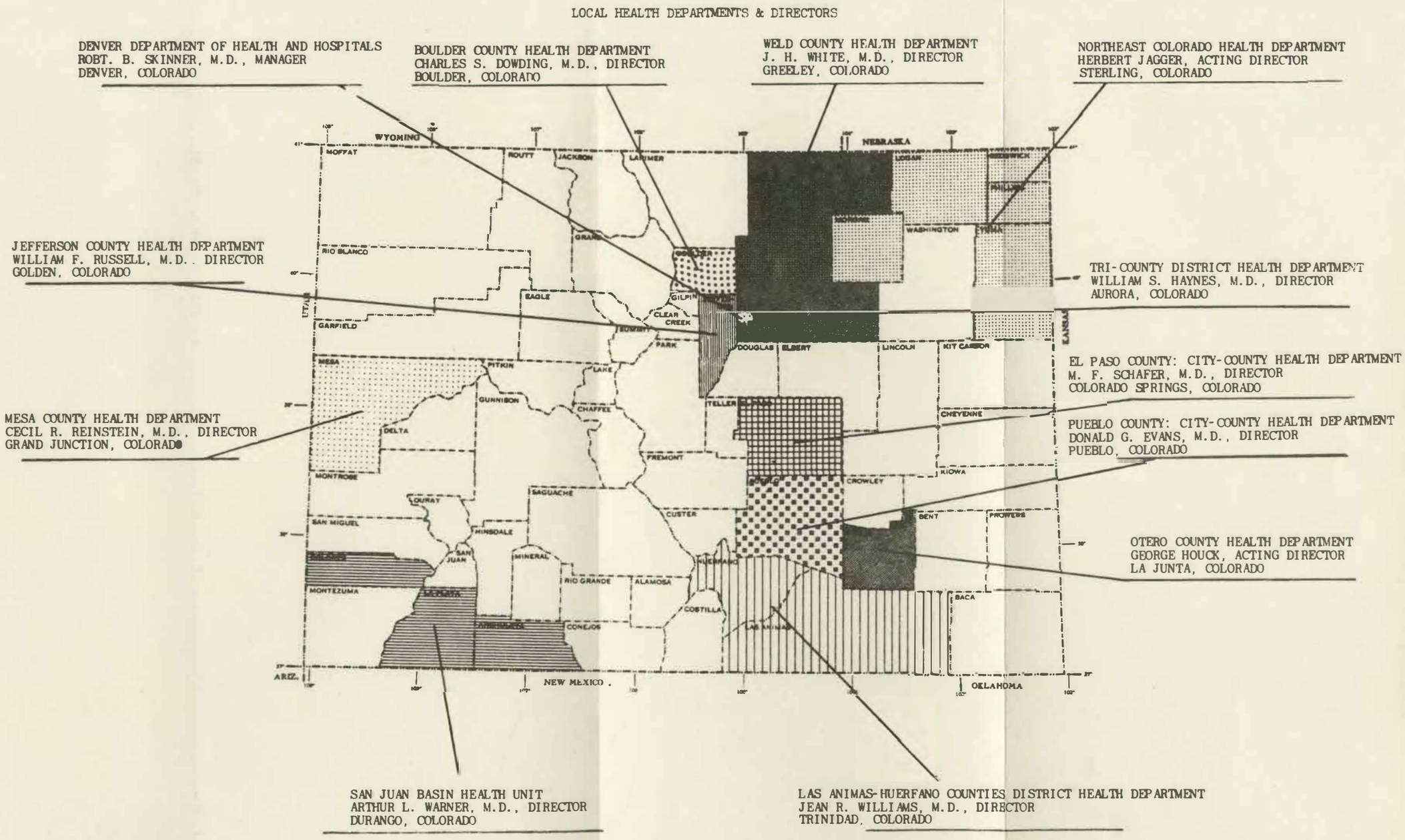


Figure 2. Colorado State Department of Public Health, Local Health Departments and Directors, 1965.

these local health departments. Twenty-nine of the remaining counties are served by one or more public health nurses.

Due to a vacany in the position of Local Health Services Director, selected department personnel have been designated as District Coordinators to provide administrative direction and advisory service to public health and medical personnel in assigned areas of the state. It is hoped that organized departments can be formed in other areas of the state and that qualified medical directors can be obtained for all of the presently established local health departments (6).

State funds are appropriated annually to the Colorado State Department of Public Health by the legislature. Additional money is allotted to the health department from federal funds through the United States Public Health Service, the United States Children's Bureau, and through grants for special projects (6).

CHAPTER IV

THE NUTRITION SERVICE OF THE STATE HEALTH DEPARTMENT

The Nutrition Service is organized in the Maternal and Child Health Section of the Child Health Services Division. This placement follows the common administrative pattern of establishing the nutrition service in the Maternal and Child Health unit. The interest of the Children's Bureau, as evidenced in financial support for nutrition services, has been a factor in this organizational plan (12).

Nutrition services in the Colorado State Department of Public Health began in November of 1947, when a biochemist was assigned to the Division of Preventive Medical Services. After her resignation in August of 1950, the department lacked nutrition services until a position for a public health nutritionist was established in October of 1957, through Children's Bureau funds in the Section of Maternal and Child Health of the Division of Child Health Services. The position was soon vacated, however, and a second nutritionist was employed who stayed with the department only a few months. Then, in the fall of 1960, the present Senior Nutrition Consultant joined the Maternal and Child Health Staff, improving the caliber of the program by strengthening and stabilizing the nutrition services offered.

The senior nutrition consultant is administratively responsible to the Chief of the Maternal and Child Health Section who also serves as the Division Director of Child Health Services and as the obstetrical

consultant. The development, coordination, and administration of a statewide nutrition program is the responsibility of the nutrition consultant.

In 1962, the position of dietary consultant for nursing homes and small hospitals was created with financial support from the Chronic Disease Section of the Division of Preventive Medical Services. Although technical supervision is given by the senior nutrition consultant, the dietary consultant is administratively responsible to the Section Chief of Chronic Disease who is also the Director of the Preventive Medical Services Division. She is assigned, however, to the Hospital and Nursing Homes Section and provides dietary consultation to nursing homes and small hospitals.

As of May 1, 1965, this two-member nutrition staff was expanded by the addition of a junior public health nutritionist in the Maternal and Child Health Section. She is administratively responsible to the senior nutrition consultant and functions as a team member of the newly established State Mental Retardation Program which is financed by a federal grant. Although the junior nutritionist will serve primarily as a consultant to the State Mental Retardation Program, she will be responsible for nutrition services to migrant laborers during the summer months.

Other staff members in the Maternal and Child Health Section include a pediatrician, nursing consultant, school health nursing consultant, and medical social consultant.

All staff members must meet the state merit system qualifications. Classification of a staff member is determined according to his education,

training, and experience. Job specifications for the three nutrition positions are found in Appendix A, page 59.

Orientation to the Colorado State Department of Public Health is provided each new employee through the Personnel Section of the Administrative Services Division. Orientation to the nutrition program is provided with emphasis upon the areas of responsibility of the new employee. For example, the junior nutritionist will be carefully oriented to the Migrant and the Mental Retardation Programs of the state. Plans are underway to provide field trips to mental retardation clinics in Los Angeles and the University of Washington as one means of broadening her knowledge in this field.

Nutrition staff meetings are not presently deemed necessary due to the few personnel. However, the senior nutrition consultant must attend the monthly staff meetings of the Maternal and Child Health Section and is invited to attend the monthly meetings of the department heads of the state health department.

Future plans include the establishment of monthly nutrition staff meetings involving the nutritionists from the Phenylketonuria Clinic, the Children's Developmental Center, and the Adolescent Clinic at Colorado General Hospital located adjacent to the state health department. The nutritionist in the newly formed Maternal and Infant Project in a neighboring local health department will be included. Technical assistance and/or nutrition supervision is given to each of these non-staff nutritionists. Staff meetings would facilitate patient follow-up and the coordination of all nutrition services.

Requests for nutrition services may be initiated by a member of the staff of the state health department, a local health department, a voluntary agency or other local organization, or by an individual. The manner of request may range from a formal letter to a phone call, or the message may be relayed simply by word of mouth that a nutrition service is needed. Individual requests for help with special dietary problems are granted only with the approval of a physician. Because of the limited nutrition staff, dietitians are often utilized from an area where consultative services are requested.

Although written reports are not required of the nutritionist, she prepares monthly activity reports and routinely writes reports of any field trips. Carbon copies of all reports are sent to the Chief of the Maternal and Child Health Section as one way of keeping him informed as to the nutrition services provided by the state. Activity reports are sent to the regional office of the Children's Bureau in Denver, which are forwarded to the regional nutritionist in San Francisco who is the consultant for Colorado. These reports are valuable to the state and regional nutritionists as a means of evaluating nutrition services.

The student observed the evaluation of the Colorado Nutrition Program by the Children's Bureau Regional Nutrition Consultant. She and the Senior Nutrition Consultant discussed in depth nutrition needs and how these needs were being met by the on-going nutrition program. Suggestions were made to the nutrition consultant as to how IBM cards may be utilized for the purpose of keeping statistical data showing the scope of the nutrition program and services given.

Nutrition staff members actively participate in local, state, and national professional organizations as a means of continuing education and public relations. During her field experience the student attended, with a staff member, meetings of the Colorado Home Economics Association, Colorado Public Health Association, and Colorado Dietetic Association. She participated in the "Dial-a-Dietitian" project of the Denver Dietetic Association by helping the nutrition consultant answer the questions posed.

CHAPTER V

NUTRITION ACTIVITIES

The objective of the Nutrition Service of the Colorado State Department of Public Health is to improve the health status of the people through nutrition education in the development of good eating habits. Cultural and economic levels of the people are basic factors which are considered. To reach this objective the Nutrition Service utilizes the skills of the staff members of the state and local health departments, physicians, voluntary agencies, and other community resources.

The nutrition program carried out in the State of Colorado is greatly influenced by the limited staff and administrative placement of the Nutrition Service. Due to this placement, Maternal and Child Health and Crippled Children's Programs of the Child Health Services Division receive priority consideration in planning allocation of time. All generalized nutrition consultation is given from the state level since there are, as yet, no regional or local nutritionists.

Much nutrition education is carried on by the public health nurse working both in the local health departments and in the counties without the services of a local health department. Therefore, the nutritionist provides consultation to the supervising nursing consultants in the state health department. Priority consideration, however, is given to the Maternal and Child Health Nursing Consultant who often requests nutrition consultation in planning and developing her nursing program. In addition

to the nutrition education offered on a state level, in-service education of the local nurse is stressed.

A detailed description of the total nutrition program in Colorado will not be attempted. However, this report describes in some depth the major programs through which nutrition services are made available to the consumer. Nutrition services are carried on through activities in (1) the Child Health Services Division, (2) other divisions of the state health department, and (3) other community agencies and organizations.

I. PROGRAMS OF THE CHILD HEALTH SERVICES DIVISION

Because of the administrative placement of the Nutrition Service, emphasis is placed upon programs of the Maternal and Child Health and the Crippled Children's Sections in the Child Health Services Division. Nutrition activities observed during field training which centered around the programs of these two sections are discussed.

Maternal and Child Health Section

The Maternal and Child Health Section directs its efforts toward expanding basic services to meet population growth. Priority needs are developing more comprehensive and better coordinated health services for children and pregnant women; increasing special health services for premature infants, adolescents, and mentally retarded children; preventing communicable disease; and preventing accidents (6). Emphasis on nutrition is included in services for the mentally retarded, for the migrant laborers, and for other mothers and children seen in clinics or local health departments.

Mental retardation. In May of 1965, a public health nutritionist was added to the staff of the Colorado State Department of Public Health as one of the six participating personnel in the newly formed Mental Retardation Program. Other members of this special project, funded by the Children's Bureau, are the project director who is also the Director of the Child Health Services Division, pediatric consultant, nursing consultant, social consultant, and occupational therapist who also functions as the vocational counselor. This team will give consultative service to the five Mental Retardation Evaluation Centers operating throughout the state.

The aims of the project are as follows: to provide diagnostic, therapeutic, training, and rehabilitative services for mentally retarded children in Colorado to develop their maximum potential and adjustment in society; to coordinate efforts of the state health department with other state and voluntary agencies in developing comprehensive services for mentally retarded children at the community level; to provide adequate services at the community level and to make the community aware of the potential of the mentally retarded and the responsibility of the community to provide service (13).

The nutritionist will provide consultation at the state and local level in the Mental Retardation Program on nutrition-related problems including the following: self-feeding techniques; modification of foods in special eating problems, such as swallowing or chewing; special diets as ordered; and maintenance of adequate nutrient intake. Limited direct

service may be necessary, but emphasis will be on stimulating the clinic staff of the Mental Retardation Evaluation Centers to become fully aware of nutrition problems and needs of the children as well as ways of determining and meeting these needs. Consultation with public health nurses doing follow-up for the centers will be included (13).

Coordination of nutrition recommendations will be implemented by the nutritionist between such agencies as the evaluation clinics and the phenylketonuria program at Colorado General Hospital. This coordination of recommendations will be carried out with the Crippled Children's Program of the state health department when a mentally retarded child has need of this state service. Again, consultation with the public health nurse following the patient's progress is necessary (13).

The nutritionist on the mental retardation staff will provide consultation on nutrition and adequate food service to other agencies such as day care centers, special education classes (if separate from public schools), sheltered workshops, and residential institutions when these are providing a meal or meals for the mentally retarded child. She will participate in the in-service education of health department staff members and staff members of other agencies who are concerned with nutritional problems and needs of the mentally retarded child. Practical and economical ways of meeting these needs in a home and family setting will be emphasized (13).

The student attended a workshop for representatives from the five Mental Retardation Evaluation Clinics, the Child Health Services Division, and the Children's Bureau Regional Office. The purpose of the

conference was to familiarize the group with the organization and operation of the various clinics and to discuss pertinent problems. Although nutrition services and problems were not discussed, the student gained a broader understanding of the Mental Retardation Program. The workshop was held before the junior public health nutritionist joined the State Mental Retardation Team.

Of the five clinics represented at the workshop, the Children's Developmental Center at the University of Colorado Medical Center is the only clinic that plans to include a nutritionist as a staff member. Other disciplines participating in the local clinics are physicians acting as team leaders, psychologists, psychiatrists, social workers, and public health nurses. Each local clinic is staffed differently and not all of the above positions are included in every center.

Migrant labor. Some malnutrition exists among migrants, and without help, their dietary practices will tend to deteriorate rather than improve as they use more and more prepared foods and abandon their simpler diet. Nutrition services were first provided for migrant laborers in the summer of 1962 when the nutritionist surveyed a migrant camp in Weld County to see if, and how, the distributed commodity foods from the State Department of Public Welfare were utilized. Another phase of the study was to see if the migrants would be agreeable to, or accept, any kind of nutrition education. From this simple, although time-consuming, study it was concluded that a continued need existed for the distribution of commodities and education as to the use of these foods.

In 1963, a public health nutritionist was employed for the summer months to work with migrant families. The Migrant Nutrition Program centered around the four objectives of (1) full use of commodity foods, (2) improved food purchasing practices, (3) modified diet consultation, and (4) the development of methods to teach migrants nutrition. A demonstration house was provided at the camp for the nutritionist's use.

The workshop method was found to be the most effective technique in demonstrating uses of commodity foods to improve the family diet. Boys and girls from ten to fourteen years of age were the easiest to reach with nutrition education. This group responded best to the workshop method where they were able to prepare food items demonstrated by the nutritionist.

The teaching of good buying practices was limited due to a lack of comprehension of arithmetic by the migrants. Foods needed to improve the nutritional value of the migrant "beans and tortilla diet" were stressed by the nutritionist in home visits, demonstrations, and workshop meetings. Dietary consultation was given to the migrants on problems related to weight reduction, diarrhea, child nutrition, and ulcers.

The nutritionist felt the summer's work was successful and that a potential existed for future nutrition activities. Experiences from the 1963 program indicated that group work with homemakers and adolescents could be done by less specialized personnel supervised by the nutritionist. Plans were made in 1964 to employ home economics teachers as nutrition aides. Their projected activities included helping the women and families improve their basic diet through better food buying and

preparation and use of commodity foods. Unfortunately, these plans were not realized due to problems at the local level.

The primary nutrition activity in the 1964 Migrant Program was the development of a simple nutrition guide to be used by teachers in migrant schools. This material, which demonstrated ways of including nutrition units, was prepared by the Senior Nutrition Consultant with the help of the Director of Migrant Education for the state. Visits were made to migrant schools in order to talk with teachers as to ways that the nutrition guide had been used and as to methods and plans for integrating nutrition education into migrant schools during the next year. The materials had been found useful. Breakfast materials had been integrated with social studies, and information on nutrients had been used with science classes in the upper grades. The lower grades had made basic food charts using foods they had eaten.

Due to crowded conditions no nutritionist attends clinics held in migrant camps. However, the nutrition consultant made weekly visits to the camp to confer with the public health nurse concerning nutrition problems and for follow-up on cases referred with dietary problems.

The student attended a planning conference for the 1965 Migrant Program. In the statewide services offered, nutrition is one of the five program areas emphasized. Other areas include tuberculosis control, sanitation, dental care, and public health nursing. Nutrition plans for the summer will be under the direction of the junior nutritionist.

The proposed plan for nutrition services to migrants includes positions for two home economics students from Colorado State College at

Greeley who will carry out a home economics program in the individual migrant houses and camp settings. Direct service may be given to the migrant schools in relation to nutrition education. Arrangements are being made to work with Mrs. Clara Funderburk, Head of the Home Economics Department at Colorado State College, in developing materials to utilize interest in foods and clothing as tools for increasing and improving reading and other related skills.

The student visited the migrant camp in Weld County where the summer nutrition activities will take place in order to see the facilities available. Each family lives in a small one-room cabin furnished with a bed (no mattress), one small table, and a two-burner gas hot plate. Running water is not provided in the cabins, but outside faucets are located between cabins to be shared by more than one family. Separate toilet facilities, centralized in one building at the camp site, provide latrines, wash basins, showers, and a central room equipped with tubs and water for the laundering of clothes.

A planning conference composed of the State Migrant Program Director, the junior and senior nutritionists, and the Head of the Home Economics Department at Colorado State College was attended by the student. The purpose of the conference was to select two interested students for employment in the summer Migrant Program and to discuss funding for salaries. With the exception of the Head of Home Economics, the planning committee then met with the Weld County Health Officer who agreed to provide the needed funds for the salaries of the students, later being reimbursed with federal funds obtained for the State Migrant Program.

Local health departments. Consultation to local health departments is given priority consideration by the Nutrition Service. The development of special projects at the local level is a trend which will increase the demand and emphasize the need for consultation in planning. During field training the Senior Nutrition Consultant cooperated with the Tri-County Health Department in writing the nutrition component of a Maternal and Infant Project which was submitted to the Children's Bureau for a grant of 75 per cent of the required funds. The remaining 25 per cent will be furnished by the local health department. The purpose of the project is to provide a comprehensive program of preventive health services and medical care to low income maternity patients who have, or are likely to have, conditions which are hazardous for themselves and their infants.

Staff members for the proposed nutrition program include a public health nutritionist, a home economist, and four home-management aides. Proposed job specifications for these three positions are found in Appendix B, page 62.

The public health nutritionist for the project will act as consultant to the local health department's professional staff, give direct patient counseling when necessary, work with appropriate agencies and groups within the community to improve the general nutritional status of the population with emphasis on promoting good nutrition for the teenage girl and other potential mothers, and develop nutrition teaching materials. Since problems of the high risk maternity patient are often

related to inability to manage the household well, a home economist will be employed to advise the mother concerning housekeeping chores, food buying and preparation, and child care. Including a home economist in a special project of this type is an innovation.

The pregnant woman may be overwhelmed with the burden of house and family care plus the pregnancy. Therefore, home-management aides are included in the project to provide direct housekeeping services to high risk maternity patients, working under the supervision of the home economist. These aides will relieve the high risk mother from housekeeping chores which may adversely influence the outcome of her pregnancy. Both prenatal and postnatal service will be provided as needed. The student participated in writing the original job description for the home-management aides and later helped in the revision of the specifications after they were reviewed by the Children's Bureau in Washington.

Local health departments frequently request in-service education in nutrition. Examples of topics discussed are child feeding practices, prenatal nutrition, use of commodity foods, adequacy of the "beans and tortilla diet," diabetes, and obesity. On occasion the nutrition consultant gives direct service to a patient by making a home visit with the public health nurse as a teaching demonstration of a particular nutrition service.

When a patient is referred for nutrition consultation who cannot be seen personally by the nutritionist, a diet history is requested from the local public health nurse in order to adapt the diet prescribed to

the eating patterns of the patient. Consultation with the social worker for that area is often utilized to gain a better understanding of the entire problem. The dietary information is then sent to the public health nurse who interprets the information to the patient. If the referral originated with a physician, he is sent a carbon copy of the diet.

At well-child conferences, held for any child up to school age, the public health nurse is primarily responsible for the nutrition education of the mothers and children. A Child Medical Conference, staffed by public health nurses and a pediatrician, and a Child Health Conference, staffed only by public health nurses, were observed while visiting the Denver City-County Health Department. Experiences at this local health department also included observations of nutrition instruction given by a public health nurse on a routine home visit and by a local school health nurse assigned to one of the parochial schools in Denver. Since there is no nutritionist employed in this, or any, local health department, in-service education for these nurses is an important emphasis of the nutrition consultant.

Cystic Fibrosis Clinic. A proposal has been made for the establishment of a Western Slope Cystic Fibrosis Clinic as part of the pediatric program. The purpose of such a clinic will be to demonstrate the feasibility and effectiveness of operating a regional cystic fibrosis clinic for diagnosis and treatment. The project will be sponsored jointly by the Cystic Fibrosis Center of the University of Colorado Medical School, the Colorado State Department of Public Health, the Cystic Fibrosis Association,

and St. Mary's Hospital at Grand Junction, Colorado, where the clinic will be located.

Staff members will include a medical director, pediatrician, physical therapist, medical secretary, and the senior nutrition consultant who will offer nutrition consultation as well as work with the Chief Dietitian at St. Mary's Hospital and with the clinic staff for the development of nutritional guides. She will participate in a quarterly staffing of the clinic in Grand Junction, in in-service work with local nurses, and if possible, in work with local dietitians and families as needed.

Adolescent Clinic. The Adolescent Clinic in Denver, sponsored jointly by the Department of Pediatrics of the University of Colorado Medical Center and the Colorado State Department of Public Health, gives diagnostic and therapeutic services to adolescents aged twelve to eighteen. Referrals are accepted from physicians, schools, public health nurses, juvenile courts, and correctional agencies. In addition, the patients themselves may contact the clinic. Various medical specialists, interested in the problems of the adolescent, staff the clinic. This project utilizes funds made available by the Children's Bureau. The senior nutrition consultant provides consultation to the nutritionist at the Adolescent Clinic (5).

Crippled Children's Section

During her field experience the student attended the state sponsored Hearing, Orthopedic, and Amputee Clinics of the Crippled Children's Program.

Nutritional counseling is given to those patients with dietary problems referred from the various clinics. Patient follow-up is provided through the public health nurse in the area where the patient lives. Due to the limited nutrition staff, a nutritionist usually does not give direct service to these clinics. The public health nurse is relied upon to give nutrition instruction and/or to request consultation from the nutritionist.

Hearing Clinics. The Hearing Conservation Program, staffed by two audiologists, an otologist, nursing consultant, social consultant, and local public health nurse, was established in order to find, diagnose, and treat children who have hearing impairments. The student attended a Hearing Clinic in one of thirty-three counties serviced. Testing by the audiologist and examination by the otologist was observed. Although no nutrition consultation was requested at this clinic, the need for adequate nutritional intake exists for maintenance of healthy tissues and for healing after surgery.

Orthopedic Clinics. The Crippled Children's Program in general orthopedics was established in 1936. Since that time clinics have been set up in nearly every county in the state, and children are seen for diagnostic evaluation of any orthopedic handicap. Children are taken on the program if they meet the requirements, both medical and financial, and are given complete care until they reach age twenty-one, or until the handicap is corrected, or until it is determined that maximum remedial benefit has been obtained. All clinics are staffed by an orthopedist, orthologist (brace fitter), nursing consultant, social consultant, and the local public health nurse (14).

A card file of all patients referred from the orthopedic clinics is maintained in the central nutrition office. The information filed includes the name, address, county, age, name of referring and examining physicians, referral date, brief history, diagnosis, height and weight, and recommendations. This system facilitates patient follow-up when the necessary information is conveniently available.

Direct nutrition service was given by the student at the Orthopedic Clinic held in western Colorado to two teenagers whose excess weight presented a threat to their orthopedic condition. In both cases no specific diet order was requested; however, guide lines for weight reduction were given using the Basic Four Food Groups as a pattern. The dietary instructions were based upon diet histories obtained from the patients and knowledge of their economic status. Upon returning to the state health department, appropriate materials were included in a report sent to the local public health nurse who would visit the patients and interpret the materials and instructions for them. A copy of this report was filed in each of the patient's medical charts. Since many cases of this type are seen, it is hoped that a guide can be developed for use in the clinics to help parents and nurses anticipate and prevent the potential problem of overweight.

Due to the number of obesity cases referred from the Crippled Children's Clinics and the prevalence of the condition in the Adolescent Clinic at Colorado General Hospital, a cooperative conference on obesity in childhood and adolescence is being planned for the spring of 1966.

Members of the planning committee include nursing and nutrition consultants from the Maternal and Child Health Section of the state health department, a nurse from the Colorado Nurses' Association, a nurse from the public health nurses' group, the physician in charge of the Adolescent Clinic, and a research dietitian from Colorado General Hospital. The topics under consideration are incidence of obesity, causes and possible related preventive aspects, problems in obesity, and various treatments of obesity.

Amputee Clinic. The Amputee Clinic at Craig Rehabilitation Center in Denver was established in 1961, for children throughout the state who have amputated extremities. Children are taken into the clinic and evaluated for a prosthesis and sent to the prosthesis maker with a "prescription." After receipt of the prescribed appliance, the child is given an extended training program in the use of his new prosthesis (14).

While attending the Amputee Clinic, the student observed examinations by the physician and instructions given by the occupational and physical therapists. Other members of the medical team include a social consultant, nursing consultant, and prosthetist. The student gave brief instruction to a child wearing an artificial leg who had use of but one lung. Her excess weight not only hindered the proper use of her prosthesis, but also caused undue stress in breathing.

II. PROGRAMS OF OTHER DIVISIONS OF THE STATE HEALTH DEPARTMENT

Nutrition consultation is given to all divisions of the state health department upon request. Examples of cooperative activities include consultation given to the Dental Health Section of the Special Health Services Division, the Radiological Health Section of the Occupational and Radiological Health Division, and the Chronic Disease and Hospital and Nursing Homes Sections of the Preventive Medical Services Division.

Special Health Services Division

Dental Health Section. The activities of the Dental Health Section of the Special Health Services Division can be classified in the general areas of dental inspections in schools, promotion of fluoridation in community water supplies, treatment for children with severe dentofacial handicaps, and professional and public education (6).

The Senior Nutrition Consultant, working jointly with the Dental Health Consultant, developed a publication for use in the public education program of this section. The leaflet, "Food For Fun," emphasizes snack and party foods low in sugar content but high in food value. A copy of this leaflet is found in Appendix C, page 67.

Occupational and Radiological Health Division

Radiological Health Section. Activities of the Radiological Health Section of the Occupational and Radiological Health Division include

participation in the nationwide Air Surveillance Network project for the detection of radioactive fallout, a statewide program of monitoring milk for radioactivity, and research projects such as the use of the whole body counter in the surveillance of the amount of radioactivity in human beings (6). The Radiological Health Section is currently involved in a radiological study in two areas of the Western Slope of Colorado where large piles of mine tailings are present. This material, left after the extraction of radium ore, is suspected of being a public health hazard due to the possibility of excess radioactivity. In exploring this hypothesis, air, water, soil, and food are being evaluated for radium content. The student saw these mine tailings during her visit to the Western Slope.

The Senior Nutrition Consultant and the student cooperated in the study by supplying a week's moderate cost market order, typical for a family of four living in the areas to be studied. A similar order was prepared incorporating foods included in the low cost "beans and tortilla diet" of the Spanish-American people of this area. The latter diet was of particular interest since radium tends to concentrate in dried beans and peas. Using these market orders as a guide, foods will be purchased in the local markets of the areas in question and monitored for radium.

As another means of evaluating the extent of radioactivity present in the typical diet of the Western Slope, food aliquots of institutionally cooked meals will be obtained from state institutions in the area and counted for radium. An additional technique employs the use of the whole

body counter for monitoring radium body content of selected persons in the Western Slope area.

Preventive Medical Services Division

Chronic Disease Section. The Chronic Disease Section of the Preventive Medical Services Division conducts a many-phased program to control the prevalence and severity of chronic disease in persons of any age, but its primary focus is on adult health. Program areas emphasized in this section are heart disease, arthritis, cancer, diabetes, glaucoma, rehabilitation, and chronic disease investigation (6).

A current request for nutrition consultation originated with a physician in the Chronic Disease Section. A list of foods high in potassium content, emphasizing fruits and fruit juices, was needed for use with the heart patient requiring a sodium restriction. Diuretics prescribed for these patients cause not only the necessary excretion of sodium, but also of potassium which must be replaced in the body. Weight control is usually an additional problem; therefore, the caloric value of these high potassium foods was significant. The student compiled the desired information.

The dietary consultant is a staff member of the Chronic Disease Section. She functions, however, in the programs of the Hospital and Nursing Homes Section. Many problems related to chronic disease, particularly diabetes, are encountered in her work with small hospitals and nursing homes.

Hospital and Nursing Homes Section. The Hospital and Nursing Homes Section is responsible for inspections, evaluations, and licensing of hospitals, nursing homes, and other health establishments throughout the state. In addition, the section compiles the State Plan for Construction of Hospitals and other Medical Facilities under the Hill-Burton program of federal aid to the states. Review of plans and specifications, and approval prior to the start of construction is a time-consuming activity of the section (6).

Primarily direct service is given by the dietary consultant to approximately fifty small hospitals and 175 nursing homes in the State of Colorado. Although consultation may be requested from an institution staffed with a dietitian, emphasis is placed upon the education of cooks, food service supervisors, and administrators in the institutions without a qualified professional person in the food service. The student spent one day with the dietary consultant visiting various nursing homes and small hospitals.

A variety of techniques are employed by the consultant in her education program. A short newletter, "Food for Thought," is prepared every other month to relate food service information to these small institutions. Periodically, publications are compiled concerning such specific topics as menu planning, food purchasing, food storage, food preparation, safe food service, equipment, personnel management, equipment maintenance, employment practices, and record keeping. The consultant suggested that each institution purchase a loose-leaf notebook for use as a file for these reference materials.

Upon discovering the poor quality of the evening meal in most of the institutions visited, the dietary consultant prepared the booklet, "Better Evening Meals," illustrating simple recipes requiring a minimum of preparation time. In an effort to encourage the institutions to write and follow cycle menus, the consultant prepared a sample three-week menu cycle for each of the four seasons. Realizing the limited educational background of most employees in the small hospital and nursing home, the consultant developed a simplified diet manual.

Present and future plans include the preparation of a salad and vegetable recipe booklet and the production of a $10,000 color movie film for nursing homes. The purpose of this production is to emphasize to the employee the importance of food service in the total care of the patient. It is hoped that this twenty minute film, financed by the United States Public Health Service, will motivate employees to take pride in their work, thus reducing the present rapid turnover of employees.

Small food service lectures are held periodically throughout the state involving not more than five nursing homes or small hospitals. In March of 1965, the first statewide Food Supervisor's Workshop was held, sponsored by the Colorado Dietetic Association. The dietary consultant was an active committee member involved in the planning.

The dietary consultant, in cooperation with the Hospital and Nursing Homes Section of the Preventive Medical Services Division, aids in the evaluation of the food service as a part of the licensing requirement. An effort is made to use these evaluations as an educational tool

for the institution rather than just a means for meeting minimum requirements. Presently, the dietary consultant is revising the food service section of the State Minimum Standards for Nursing Homes, Homes for the Aged, and Other Similar Health Establishments.

III. COOPERATIVE SERVICES WITH OTHER COMMUNITY AGENCIES AND ORGANIZATIONS

Nutrition services of the state health department are coordinated with various community agencies and organizations. Cooperative activities have been developed with the Community Homemaker Service, Colorado Heart Association, Colorado Diabetes Association, Colorado Dairy Council, Denver Community Action Committee, State Department of Education, State Department of Public Welfare, and local nutrition research units.

Community Homemaker Service

The Community Homemaker Service is a non-profit organization which offers help to families with children, to convalescents, aging, acutely or chronically ill and disabled persons, or to all of these. The primary function is the maintenance of household routine and preservation or creation of wholesome family living in times of stress. Fees charged for these services, available to any family on a temporary basis, are dependent upon the family's income.

One day was spent with the Community Homemaker Service, an agency unfamiliar to the student. Included in the day's activities were an evaluation visit to the home of a family desiring service, and attendance at the monthly staff meeting of Homemakers. The perceptiveness and

capabilities of this group of women became apparent during their discussion of the various assignments and related problems.

The Senior Nutrition Consultant has cooperated with the Homemaker Service by her participation in the required training course for the Homemakers. Since these women are frequently responsible for food preparation in the homes serviced, the nutrition instruction given them provides an indirect avenue for education in each family.

Colorado Heart Association

The Senior Nutrition Consultant, who is also chairman of the Nutrition Committee of the Colorado Heart Association, has worked closely with this agency in nutrition-related activities. An exhibit featuring the role of diet in heart disease was assembled by the nutritionist to be used for the "Heart Fair" sponsored by the Colorado Heart Association. The pamphlet, "More Appeal for the Every Day Meal," emphasizing low-sodium cookery ideas was prepared for use as hand-out material in conjunction with the exhibit. A copy of this pamphlet is found in Appendix C, page 68. The nutritionist presented a review of diet in heart disease to the public health nurses who manned the exhibit.

Colorado Diabetes Association

Cooperative work has been done with the Colorado Diabetes Association. The Senior Nutrition Consultant has encouraged public health nurses to inform the parents of diabetic children concerning Juvenile Diabetic Summer Camp. Sponsored by the Colorado Diabetes Association

and the Denver area YMCA, this camp provides medical, nursing, and dietary supervision. No child is denied camp experience because of inability to pay. Materials available through this agency are frequently utilized by the nutrition consultant in her work with diabetic patients.

In March of 1965, the nutritionist attended the Annual Diabetes Institute of the Colorado Diabetes Association as an invited guest. This institute provided current information concerning the cause, treatment, and control of diabetes melitus.

Colorado Dairy Council

The Dairy Council in Denver, Colorado, recently became the Colorado Dairy Council. Their educational materials, therefore, are now available to all public health nurses and teachers throughout the state upon request. The senior nutritionist utilizes this nutrition material as teaching aids for nurses, teachers, and individuals. She works closely with the nutritionist from the Colorado Dairy Council on educational programs.

Denver Community Action Committee

The Senior Nutrition Consultant was appointed by the Mayor of Denver as chairman of the Family Living and Home Management Committee, one of thirteen committees in Denver's Community Action War on Poverty Program. The nutritionist worked with the low income families on this committee in an effort to help these people help themselves. Although nutrition education was not a definite part of this undertaking, the Senior Nutrition Consultant, by using her knowledge of home economics, helped

set the stage for the introduction of many types of educational activities. Her work was based on the philosophy that any effort to improve the standard of living will concomitantly improve the nutritional status.

In June of 1965, the Senior Nutrition Consultant participated in the training session for teachers in the HEAD START Program. The training school, sponsored by the University of Colorado at Boulder, will be held in Denver. The nutritionist, along with other members of the Colorado State Department of Public Health, will help interpret the health services available to the children and families involved in the Community Action endeavor.

Operation HEAD START is a unique program that will place disadvantaged pre-school children into an eight-week project, during June and July of 1965, thus enabling them to enter kindergarten or first grade in the fall on a more equal footing with their more fortunate neighbors. A comprehensive medical, social, nutritional, and cultural enrichment program has been planned.

Improving nutrition is one of the many goals of the HEAD START Program. It is expected that among the children attending the HEAD START Centers some will be inadequately nourished. It will be possible for the centers to obtain donated surplus food to help provide wholesome meals. Special milk distribution can be arranged through the school lunch director in the State Department of Education.

State Department of Education, School Lunch Division

A session with the director and home economist in the Division of School Lunch of the Colorado State Department of Education gave the student an understanding of the depth of their program. The home economist, who holds a degree in institution management, acts as the nutrition and dietary consultant to school lunch room managers and supervisors throughout the state in order to maintain desirable food service practices in the preparation of Type "A" lunches.

Each summer a statewide workshop is held for school lunch employees, including nutrition and/or meal planning and preparation as a regular part of the program. A monthly newsletter, "Luncheon Digest," is published by this division. One of its regular features is a sample Type "A" luncheon menu for one week which illustrates not only amounts of foods necessary to purchase for serving one hundred persons, but also the food cost per serving. In addition to the newsletter and other indirect services, the home economist regularly visits school lunch room facilities, thus making possible direct service to managers and supervisors.

In 1962, the Senior Nutrition Consultant cooperated with the school lunch home economist in the compilation of the publication, "Nutrition Guide for Teachers." This guide gives suggestions, ideas, and activities related to nutrition education.

State Department of Public Welfare

The State Department of Public Welfare works cooperatively with the Colorado State Department of Public Health including the Nutrition Service. Day care centers are under the direct supervision of the department of welfare. Nutrition consultation for these centers has been requested. During field training the nutritionist supplied the department with several copies of the Children's Bureau Publication, "Food for Groups of Young Children Cared for During the Day," and a set of Type "A" recipes to be used with directors of child care centers.

The current Food Stamp Program is requiring close cooperation between the two state agencies. The opportunity of gaining a better understanding of this program was afforded at a discussion, initiated by the Senior Nutrition Consultant, involving representatives from the Department of Public Welfare, United States Department of Agriculture, and selected staff members from the Maternal and Child Health Section of the state health department.

The Food Stamp Program was underway in five counties in Colorado as of March 1965. The purpose of this program is to improve the nutritional status of low income families by issuing stamps which can be used to obtain foods from any grocery store authorized by the United States Department of Agriculture. Applicants are certified through the Welfare Department by use of a means test. The number of stamps purchased by an individual is dependent upon his income and the food allowance standard set up by the department of welfare. Stamps are purchased once or twice monthly.

Each county has the option of choosing between the Food Stamp Program and the Direct Distribution Program of commodity foods. Both programs cannot occur concomitantly.

Food stamps are available to the following: (1) anyone now receiving welfare payments, (2) low income families who meet the requirements, and (3) migrant families meeting the requirements who are working in counties where the program is available.

Nutrition implications of the Food Stamp Program as seen by the nutrition staff are (1) a need for preparing information as to economical and nutritional food purchases; (2) a need for in-service training for public health nurses as to the operation of the program and as to their role in helping families purchase the most nutritious foods for their money; and (3) a need to familiarize the social workers with the functions of the Food Stamp Program, enabling them to work more effectively with families who may benefit from this service.

Local Nutrition Research Units

During the field experience the student visited three local nutrition research units and gained an understanding of their programs. These units are Child Research Council, Metabolic Ward at Colorado General Hospital, and Metabolic Ward at Fitzsimons General Hospital.

Child Research Council. One morning was spent with Virginia Beal, nutritionist for the Child Research Council. The complete physical, physiological, and psychological histories of approximately 200 individuals are recorded by this group yielding a clear picture of how normal growth evolves (15).

The Child Research Council is not a clinic; it does not treat diseases or disorders. When symptoms come to light, however, these are called to the attention of the parents and family physicians. The research team is composed of biochemists, nutritionists, hematologists, pediatricians, psychologists, and psychiatrists (15).

The nutritional history begins even before the baby is born. In the third month of pregnancy the nutritionist visits the mother in the home, examines the menus, and checks on the variety and quantity of food consumed. After the infant's arrival, periodic dietary histories provide records as to the child's actual intake. In several cases Miss Beal has been able to spot deficiencies and predict nutritional disorders (15).

The primary purpose of these nutritional studies is to correlate the child's growth with his food intake. The growth is measured in terms of changes in body composition of bone, fat, and muscle.

Metabolic Ward of Colorado General Hospital. The student spent one day with the dietitian at the Metabolic Ward of Colorado General Hospital. Six of the eighteen beds of the research ward, sponsored by the National Institutes of Health, are designated for patients receiving kidney transplants. Sodium and fluid restricted diets are usually ordered for these patients. The administration of steroids, given before transplant, always requires a bland diet.

The twelve remaining beds in the ward are reserved for medical research. Problems under investigation on the day of visit were (1) starvation diet for obesity, (2) gamma globulin anemia, (3) idiopathic edema,

(4) malabsorption studies in adults using a lactose-free diet, and (5) low purine diet for gout. Balance studies using medical students for subjects are done periodically in testing methods used in the research ward.

Metabolic Ward at Fitzsimons General Hospital. The metabolic ward, which is located adjacent to Fitzsimons General Hospital, is not a part of the hospital proper. It is one division of the United States Army Medical Research and Nutrition Laboratory, a unit of the Medical Research and Development Command of the Surgeon General's Office. This particular project is charged with the mission of carrying out research in nutrition and metabolism on healthy volunteer test subjects under the auspices of the University of Colorado. The personnel of the metabolic ward include physicians, nurses, a dietitian, laboratory technicians, cooks, and several others who aid in the efficient operation of the ward (16).

Research subjects are housed in the metabolic ward and fed in such a manner that more or less rigid control of all their activities can be maintained. Balance studies are carried out on human subjects designed to measure everything that is consumed (food, fluid, and occasionally medicine) and everything that is excreted (urine, feces, and occasionally perspiration or respiratory gases). Such procedures give information regarding the manner in which the human body handles certain nutritive elements in good health or while under some specific stress. In addition to collecting excretory products, blood samples are taken

for chemical analysis when necessary. In order to collect sufficient data, the duration of most studies is from eight to twelve weeks. As a result, monotony with respect to dietary intake and regulation of activities are problems that each test subject must learn to overcome (16).

The student spent one morning with the dietitian at the metabolic ward observing the facilities and functioning of the unit. A tour of the chemistry, microbiology, animal laboratory, and bioenergetics divisions of the medical research unit was provided. It was of particular interest to learn that the bioenergetics division has been a participant in many of the International Committee on Nutrition and National Defense nutrition survey teams in the United States and abroad. These personnel help in the collection of nutritional data obtained not only from food consumption records, but also from blood and urine chemistries.

CHAPTER VI

SUMMARY AND EVALUATION

The student has reported information obtained during a seven weeks' period of field observations and experiences in the State of Colorado. Due to the excellent planning of the field training by the Senior Nutrition Consultant, the student was able to accomplish the objectives stated in the introduction.

In conferences with staff members of the state and local health departments, the student gained an understanding of the organization, administration, and functions of an official health agency. Another means for meeting this first objective was provided through field trips made with the sanitarians and public health nurses at the Denver City-County Health Department. Attendance at the four-day Colorado Public Health Association meeting offered additional information and experiences.

During the period of field training, the student increased her knowledge of how nutrition programs are planned and executed to meet the needs of the people served. Meeting this second objective was accomplished primarily by (1) reading activity and project reports of the nutritionist, (2) observing the various activities of the nutritionist, and (3) observing the evaluation of the Colorado Nutrition Service by the Regional Children's Bureau Consultant. Since there are no local nutritionists in the State of Colorado, consultation techniques were emphasized.

Health statistics for Colorado are used by the Senior Nutrition Consultant as a basis for planning her statewide nutrition program. Prenatal and postnatal nutrition education gain priority in the fight against the high prematurity rate and for the prevention of mental retardation. The development of nutrition materials for use by the public health nurse in her work with prenatal patients is an unmet recognized need. An educational weight control program for children and their parents is desirable in light of the prevalence of this condition in the Adolescent and Crippled Children's Clinics. The migrant and low income populations demand a continued nutrition program with emphasis on budgeting and the use of commodity foods or food stamps. The use of health statistics as a basis for planning nutrition programs will be of value to the student in her future work.

In order to correlate nutrition activities with programs of other divisions, one must understand the scope of services provided through the official health agency. The student gained an understanding of how nutrition is integrated with the programs and services of other divisions in the public health agency. This objective was met by conferring with the nutritionist and professional workers in other divisions of the state health department. Participation in two cooperative projects with the Chronic Disease Section and the Radiological Health Section provided experience in the integration of services.

The final objective of identifying the contributions of community agencies and organizations in the development of the overall nutrition

program was successfully met. Visits were made to the Colorado Diabetes Association, Colorado Heart Association, Colorado Dairy Council, Community Homemaker Service, and to the School Lunch Division of the State Department of Education. The student became aware of how the nutrition consultant and staff members of the agencies concerned with nutrition education cooperated within the community.

In addition to meeting the specific objectives stated in the introduction, the student became acquainted with the nutrition services offered in a special project. The experience was provided by working with the Senior Nutrition Consultant in the writing of the nutrition component of a Maternal and Infant Project for a local health department. This experience was of particular interest to the student since her interests for future employment lie in this area. The student also became more familiar with the programs of the Community Action Committee by attending several committee meetings of Denver's War on Poverty Program. The entire training period increased the student's educational background in nutrition and made her more aware of the responsible role of the nutritionist in public health programs.

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APPENDIXES

APPENDIX A

JOB SPECIFICATIONS FOR NUTRITION POSITIONS--

COLORADO STATE CIVIL SERVICE COMMISSION

I. SENIOR NUTRITION CONSULTANT

Definition

Under direction, serves as a special consultant in nutrition in the development, coordination and administration of a state-wide nutrition program; and does related work as required.

Typical Tasks

Plans, organizes and promotes a state-wide nutrition program as it relates to public health activities; surveys nutrition needs and resources within the state in the development of plans leading towards cooperation with and mutual understanding with agencies having nutritional problems such as schools, institutions and local health agencies; studies needs of and makes plans to assist special groups; presents and interprets accepted nutrition principles and practices through demonstrations, study groups, workshops and other means of communications to professional health groups; prepares educational materials; participates in special studies involving nutritional problems; supervises subordinate professional personnel and clerical staff; serves as staff consultant; prepares reports as required.

Employment Standards

Any combination of experience and training equivalent to a Master's degree in nutrition or closely related field including or supplemented by courses in nutrition as applied to public health, and three years of experience in public health nutrition or related field.

II. NUTRITION CONSULTANT

Definition

Under direction, performs professional nutritional consultancy work; and does related work as required.

Typical Tasks

Performs professional nutritional consultancy work in a statewide public health nutrition program; consults with and advises nurses, teachers, schools, mental retardation programs and other groups or organizations on nutrition planning and other activities related to nutrition; develops, distributes and demonstrates educational material; participates in studies, surveys and conferences; interprets programs and coordinates program activities with civic, governmental and educational groups; assists local health departments, schools, mental health or related facilities in planning and conducting nutrition programs; maintains files and prepares technical reports.

Employment Standards

Any combination of training and experience equivalent to a Master's degree in nutrition or closely related field including or supplemented by courses in nutrition as applied to public health, and two years of experience in public health nutrition or related field.

III. SENIOR DIETITIAN

Definition

Under direction, performs professional work of a technical nature with full responsibility for supervising therapeutic diets and other food services in a medium sized State institution, or performs professional nutritional consultancy work; and does related work as required.

Typical Tasks

Gives consultation service to personnel in nursing homes and community hospitals on menu planning; food purchasing, storage, preparation and service; budgeting and cost control; modified diets; work organization; recruitment of staff and training of employees; and other activities related to food service.

Directs, plans and participates in food service institutes for food service personnel and administrators of nursing homes and community hospitals.

Develops, evaluates and distributes educational materials.

Participates in making studies and surveys related to nutrition and food service management in nursing homes and community hospitals.

Works with other agencies and professional organizations concerned with the care of persons in nursing homes and community hospitals.

Plans and participates in educational activities such as in-service training and staff development programs within the health departments.

Assists in the formulation of policies and procedures to improve standards in nutrition and food service management.

Works with health department staff members, building committees, administrators, architects, engineers, equipment specialists and others in planning efficient food service departments.

Perform related duties as assigned.

Employment Standards

Graduation from an accredited college or university with major work in dietetics or institution management, completion of an approved dietetic internship and four years of experience as a dietitian in a large hospital or institutional food service area or in teaching nutrition or diet therapy at the graduate level. Eligibility for certification by A. D. A.

APPENDIX B

PROPOSED JOB SPECIFICATIONS FOR NUTRITION POSITIONS--

TRI-COUNTY MATERNAL AND INFANT PROJECT

I. PUBLIC HEALTH NUTRITIONIST

Definition

Provides nutrition services in connection with the local public health programs for maternity and infant care under the direction of the medical director of the project with technical assistance available from the senior nutrition consultant of the State Health Department.

Examples of Work Performed

Plans, develops, coordinates and implements nutrition services as a part of the maternal and infant program.

Provides direct service on nutrition in maternity clinics as indicated and may make home visits on selected patients.

Participates in nutrition aspects of the maternity group discussions and education programs.

Provides nutrition-related staff consultation, orientation, and in-service as a part of the maternal and infant program.

Participates in case and staff conferences.

Participates in team member meetings between hospital and public health personnel and establishes liaison between hospital dietary staff and public health nutrition to insure consistency and continuity of dietary instruction.

Participates in monthly nutrition staff meetings of area nutritionists.

Reports and summarizes activities at regular intervals as determined by the project medical director.

Plans and interprets modified diets as ordered by the physicians and may instruct patients.

Plans with home economists for demonstrations and help in the home to insure that both normal and modified diet orders are followed.

Prepares and reviews selected nutrition education materials for specific needs of maternal and infant care.

Serves as consultant on nutrition related activities.

Interprets nutrition needs of mothers and infants to other agencies such as welfare, etc.

Participates in nutrition and related aspects of the training program of the home-management aides.

Minimum Qualifications

Education and experience. Graduation from an accredited college or university including or supplemented by course work required for a major in foods and nutrition. One year of graduate study with a major in nutrition including or supplemented by courses in nutrition as applied to public health, supplemented by at least one year in a public health or related agency.

II. PUBLIC HEALTH HOME ECONOMIST

Definition

Provides home economics related services in connection with the local public health program for maternity and infant care under the direction of the medical director of the project and selects, trains, and supervises the service of the home-management aides as a part of this program.

Examples of Work Performed

Plans for and conducts individual and group activities for prenatal clients to provide help in various aspects of home management that will make the necessary work done simpler, more effective, and less strain producing and yet not replace the mother's place in the family.

Selects, trains, and supervises the home-management aides as they provide housekeeping aid to the high risk mothers as needed. The home management aides will be trained in simple methods of doing routine housekeeping chores; necessary clothing care; meal planning; marketing and food preparation; and supportive infant care.

She will give close supervision to the service and may work with the aide on the job to help both the aide and the mother.

Develops and coordinates plans for evaluating learning by the mother by records related to methods used and skills shown before and after the aide service.

Participates in staff conferences.

Plans with and interprets to other agencies such as welfare for meeting home economics related needs of the pregnant woman and infant among their clients.

Reports and summarizes progress and activities at regular intervals as determined by the project medical director.

Prepares and reviews home economics related materials for specific maternal and infant needs.

Plans and works closely with the nutritionist on related activities to strengthen the group and individual nutrition education given. She will develop, with the nutritionist, actual food demonstrations for groups and in the home as required to help the pregnant woman better understand and be able to carry out diet orders. This will also include joint planning by the nutritionist and home economist for training the home-management aides in meal planning and marketing.

Minimum Qualifications

Education and experience. Graduation from an accredited college or university with a degree in general home economics or home economics education. She should have had at least three years experience in community work such as extension, education, or welfare including direct service and work with individuals or families in applied home economics topics as adapted to limited income, education and motivation.

Knowledge and ability requirements. Knowledge of home management and all related areas of home economics.

Knowledge of appropriate educational methods as applied to the population group to be served.

Knowledge of social and economics problems as they apply to families and individuals.

Ability to adapt to many situations.

Ability to train and supervise women such as home-management aides.

Ability to establish and maintain effective working relationships with individuals and groups.

III. HOME-MANAGEMENT AIDE

Definition

Provides direct housekeeping services to high risk maternity patients under the direction of the public health home economist to relieve the mother of the aspects of housekeeping which may adversely influence the outcome of her pregnancy with emphasis on utilization of this service to prevent complications.

Both prenatal and postnatal service will be provided as determined by the home economist with medical, social and nursing consultation with consideration of the mother's ability to participate. As possible, the mother will be taught by demonstration and participation simple and easy methods of doing necessary and routine activities.

Examples of Work Performed

Necessary housekeeping chores such as routine cleaning.

Necessary clothing care such as laundry and ironing.

Meal planning, marketing and food preparation.

Supportive infant care including formula preparation, care of bottles, and laundry.

Keeps records as indicated, including those developed as a part of a system to re-evaluate skills of the mother at a later time to see if any learning has occurred.

Minimum Qualifications

Education and experience. Literate and capable of learning and transferring the acquired knowledge to others. She should be a mature woman with a background of managing a home and raising a family.

Knowledge and ability requirements. Knowledge of homemaking and of raising a family.

Ability to adapt to many situations.

Ability to evaluate her home visits and to provide a link in communication between the families and professional workers.

Ability to follow the directions of a supervisor.

Be physically fit as determined by a medical examination.

Ability to encourage a free exchange of ideas between the mother and self.

Ability to gain the confidence of the mother through an unbiased and sympathetic approach.

Ability to work in the home without posing a threat to the mother's role.

APPENDIX C

PAMPHLETS

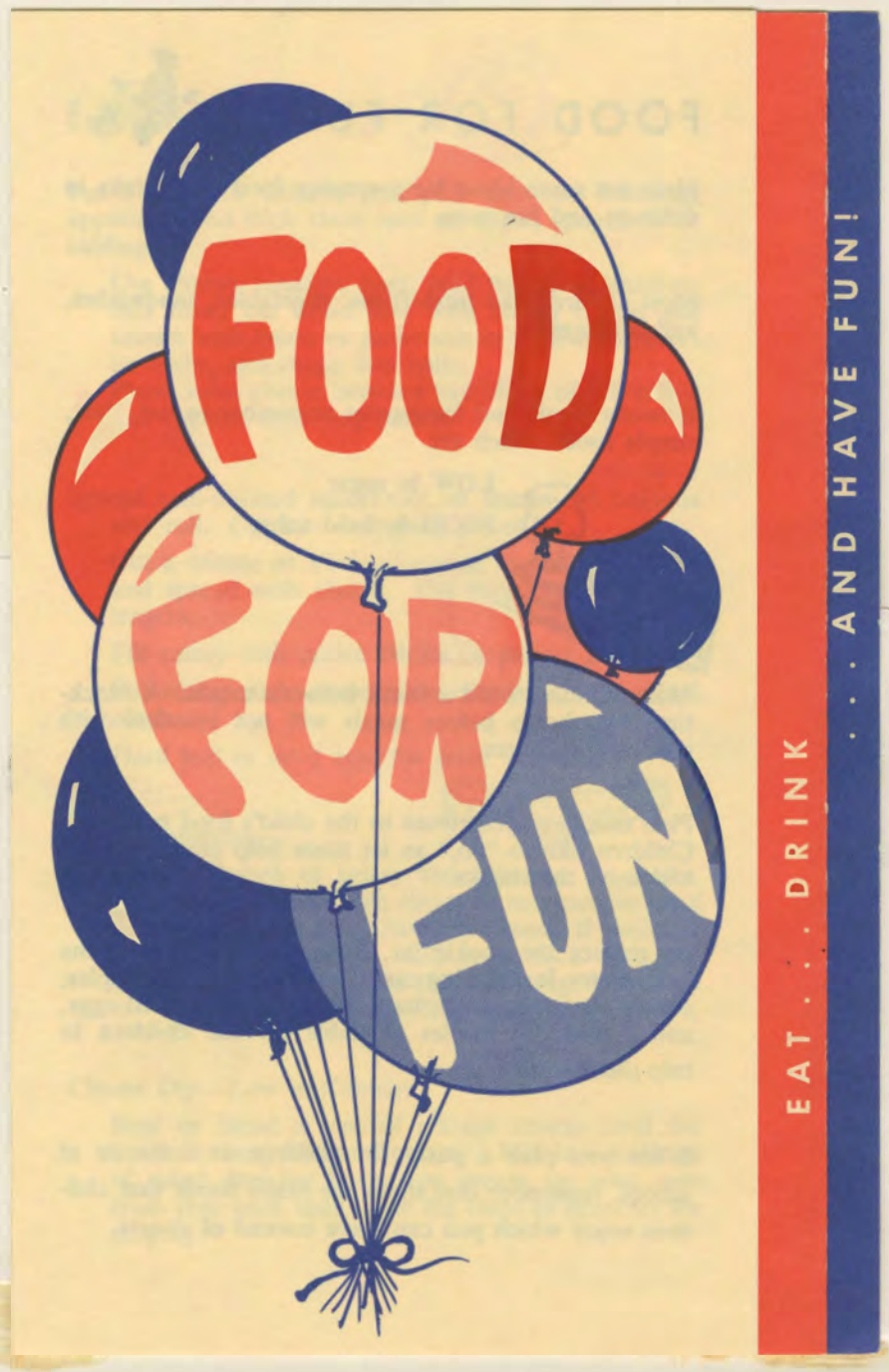


Figure 3. Food For Fun

FOOD FOR FUN



Here are some ideas for preparing food and drinks in different and fun ways.

Most children like fresh fruits, vegetables, sandwiches, and beverages.



Between meals and for parties remember to use plain, simple foods which are

LOW in sugar

HIGH in food value



Many children need a snack between meals. A snack-time two hours before meals will not interfere with mealtime appetites.



Plan snacks to contribute to the child's food needs. Children like to "do," so let them help plan, prepare, and serve the snacks.



To replace the cookie jar, have a special spot in the refrigerator for keeping carrot and celery sticks, apples, oranges, meat spreads, hard cheeses, hard-boiled eggs, and chilled dill pickles available for the children to help themselves.

When you plan a party for children at home or at school, remember that there are many foods that children enjoy which you can serve instead of sweets.

EAT



Put a plain or colored toothpick into the following appetizers and stick them into an apple, grapefruit or cabbage:

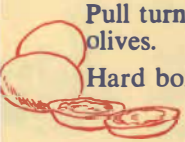
Use cheese, sausage, ham, cold turkey or chicken.
Mix finely cut dried beef with cream cheese and season with onion or garlic salt or your own favorite herbs, and shape into balls.
Place Swiss cheese between two slices of dill pickle and cut into inch-long pieces.

Spread well-drained sauerkraut on thin-sliced bologna and roll. Cut into inch-long pieces.

Cut a wiener or Vienna sausage in half lengthwise and spread with cheese. Cut these into inch-long lengths.

Fill celery with cream cheese or peanut butter.

Pull turnip sticks through the centers of ripe, pitted olives.



Hard boil or devil eggs for good snacking.



Celery Pinwheels—

Clean a bunch of celery and separate the stalks. Blend cream cheese with cream or mayonnaise (and a stronger or sharper flavored cheese if desired) until it spreads easily. Fill each stalk with the cheese mixture, and press the stalks together. Roll in waxed paper and chill. Slice cross-wise to serve.

Cheese Dip—Low in Calories

Beat or blend a pint of cottage cheese until the curds are very fine and creamy. Mix in a package of salad dressing herbs—or dream up your own from your herb shelf. Use big chips or crackers for dipping.

Finger Foods Galore—Seem to call for more and more. Chill and serve them with crackers and a cheese dip.



Sticks: Carrot, celery, turnip, fresh pineapple, rutabaga, dill pickle.



Rings: Cucumber, green pepper, pimiento, apple, orange, onion.



Wedges: Cabbage, lettuce, tomato, orange, tangerine, pear, watermelon.



Flowerettes: Cauliflower, broccoli, radish.



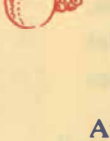
Curls: Carrot or celery.



Halves: Fresh apricot, plum, peach, cherry tomato (try splitting them and filling with cream cheese).



Fruit Bowl: Apples, bananas, grapes, pears, oranges, cantaloupe, watermelon, other melons, strawberries.



Don't forget popcorn, peanuts, pretzels, potato, corn and all the other chips—serve them in big bowls, out of the bag, or in paper cupcake cups.

At parties for the Younger One, use clever, attractive fruits for fun. The children can help with these, before or at the party.



Apple Sandwich: Core and cut an apple into half-inch slices. Put slices of cheese between each slice or spread cream cheese or peanut butter on each slice and put the apple together again.

Pear Banjo: Slice a fresh pear lengthwise, leaving on the stem. Hollow out the core and place thin pretzel sticks across the hollow for strings. (The hollow may be filled with cream cheese before adding the pretzels.)

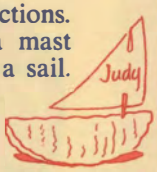


Banana Flute: Slice a banana lengthwise and arrange pieces of red cherries along the length of it to resemble a flute.



Apple Man: Attach a prune for a head to an apple body. Raisins strung on toothpicks make arms and legs.

Orange Sailboats: Separate an orange into sections. Stick a toothpick in each section for a mast and add a triangular piece of paper for a sail. Print the child's name on the sail.



A Summer Snack Favorite—Fruit Ice Sticks!
Freeze fruit juices in the ice tray. Place toothpick in each section and—behold a miniature popsicle.

Try Sandwiches to Fill that Hollow Spot

Use your originality when fixin' the mixins' for sandwiches. Here are a few favorites for fillings:

Sliced meats or ground meat spreads.

Chicken and onion.

Tuna fish with relish, green peppers and chopped egg.

Peanut butter with pickles, cheese, green peppers, grated carrot or celery, bananas, or ground raisins.
Cheese with relish, lettuce, pickles.
Hard cooked egg with salmon, lettuce, pickles, or relish.

Hot Dogs: Spread a mixture of mustard and butter on hot dog buns and top with split franks and a slice of cheese; broil about 5 minutes.



How about a sandwich loaf: Cut an unsliced loaf of bread the long way into four or five slices. Spread each layer with a different kind of spread —for example: egg, tuna, chopped meat, deviled ham, or cheese spread. Ice the top and sides with plain or tinted cream cheese thinned with milk. Chill it and slice for serving. It's pretty and good!

Put candles on it and you have a birthday cake.



Spread whole-grain or enriched bread with butter, margarine, or cream cheese (color the cream cheese for variety).

Use cookie cutters to make special shapes, such as hearts or shamrocks. (Save the crusts and trimmings for dressings—or toast in a warm oven for croutons.)

And for Hearty Appetites after the Game—Try These Broiled Hamburgers



Big Boy Sandwiches: Cut a loaf of French bread in half lengthwise; use meat or cheese slices with lettuce and relish or any combination of these to make a super-sandwich filling. Slice the loaf cross-wise into 4-5 servings.



Pizza: Make your own dough or use refrigerator biscuits, English muffins, or white flour tortillas. Have the "makings" ready and let each one put on his own topping. You will need sliced pepperoni, cheese, anchovies, chopped onion, mushrooms, bologna, etc., and tomato sauce.

All you do is bake them (at about 350°-400°) to their rich, bubbling "doneness" (10-15 minutes).

COLORADO STATE DEPARTMENT OF PUBLIC HEALTH

4210 East 11th Avenue

Denver 20

DRINK



Milk: Fresh, evaporated, or reconstituted (water added) dried milk tastes good to the hungry child, especially if the milk is well-chilled.

Try adding a tiny sprinkle of salt, a sprinkle of nutmeg and cinnamon and barely a pinch of sugar to add more flavor to reconstituted dry milk.

Fruit Juices: Use canned, fresh, or frozen juices. Orange, grapefruit, tomato, apple, grape, pineapple or cherry are all tasty.



Make lemonade with as little sugar as possible. Add grape or cranberry juice to give it a little color of lavender or pink. Cherries, cranberries, slices of lemon, lime or orange, or sprigs of mint add a party touch to drinks. (Try freezing juices into ice cubes and float them in the drink.)

A Summer Punch Bowl: Easily made from a hollowed-out watermelon. Notch or scallop edges of the top for a decorative effect. Chill it well and pour your drink into it to serve. (Use the part you hollow out in a fruit cup or just enjoy it "as is.") Use green and white paper cups to match the melon.



. . . AND HAVE FUN!

AND HAVE FUN!

Much of the fun of a party is in the games. Here again the children can share in the planning and lead the games.

Plan a variety of games—some active such as—

Wink-em
Tag
Dodge Ball



and some quiet such as—

Simon Says
Mother May I?
Charades
Read an advertisement or commercial and guess the product
20 Questions

or form teams and play—

Steal Sticks
Relay Games
Rover Red Rover

Remember the age level, interest span, and space and equipment available.

Ideas for games may be found in these books:

The Party Book by Mary Breen (A. S. Barnes & Co.)

The Complete Book of Party Games by Clement Wood & Gloria Goddard. (Garden City Books)

Games for the Elementary School Grades by Hazel A. Richardson. (Burgess Publishing Co.)



Figure 4. More Appeal for the Everyday Meal



More appeal for the everyday meal





TO SERVE UP FOOD WITH MORE APPEAL,
USE ONLY TWO OR THREE SEASONINGS IN ANY ONE MEAL.
A PINCH OR A DASH OF EACH WILL DO -
NOT TOO MANY AND NOT TWO FEW.

Allspice - Pot roast, boiled fish, baked apples, puddings.

Bay leaves - Soups, stews, potatoes, carrots, tomatoes, boiled meats.

Cinnamon - Sweet potatoes, cinnamon toast, french toast, applesauce, pies, cookies, fruits, custards and puddings.

Cloves - (If used whole, remove before serving) potato soup, pork roast, stews, stuffings, cookies, cake and fruits.

Curry - (Read the label to be sure it contains no salt or sodium.) tomatoes, tomato soup, meat and fish dishes, scrambled eggs.

Garlic - (Use fresh garlic cloves or pure garlic powder - do not use garlic salt.) Meat, fish, poultry, cook in unsalted butter or oil for use on vegetables or bread, sauces, dressings, spaghetti sauce and salads.

Horseradish root - Use alone with meats or combine with cream for roasts.

Lemon juice - Desserts, puddings, vegetables, especially good on salads and fish.

Dry Mustard - Mix with water as seasoning with steaks, chops, hamburger. Use in green beans, white sauce, dressings.

Nutmeg - Use with sweet potatoes, cauliflower, cabbage and slaw, spinach, french toast, fruits, puddings and eggnogs.

Onion - Use with meats and vegetables.

Oregano - Add to lamb, pot roasts, meat loaf, creamed chicken, beans, peas, squash, broccoli, spinach, tomatoes, omelets and scrambled eggs.

Paprika - Chicken, veal, fish, stews, potatoes, tomato, sauces, salads and egg dishes.

Parsley - Use with all soups, lamb, veal, steak, stews, boiled potatoes, carrots, peas, stuffings, salads, omelets, scrambled eggs.

Pepper - Black, red, or white - use on meats, fish, poultry or vegetables.

Peppermint - Use in desserts, on fruits and carrots.

Sage - Use in cream soups, stews, pork,meat loaf, lima beans, eggplant, onions and tomatoes.

Brown and White Sugar - Cereal, desserts, tomatoes, sweet potatoes, squash and rice.

Vanilla - Desserts, puddings, eggnog.

Wine - Use in stews, mix with hamburger for patties or meat loaf, use in sauces for meats, poultry and fish. Use in fruit cups. (The wine companies often provide booklets on cooking with wine.)

USE HERBS AND SPICES FROM YOUR SHELVES,
TO PREPARE MANY TASTY DISHES FOR YOURSELVES.

Use only 2 or 3 herbs and spices in any one meal - Only small amounts - just a pinch or two.

Beef - Pepper, nutmeg, onion, sage, bay leaf. Serve with mustard, grape jelly, horseradish.

Pork - Onions, cloves, garlic, sage, pepper, horseradish. Serve with applesauce, spiced apples.

Lamb - Curry powder, garlic, mint, pepper, oregano. Serve with mint sauce, mint jelly, pineapple rings.

Veal - Bay leaf, curry, ginger, pepper. Serve with currant jelly or spiced apricots.

Chicken - Paprika, sage, parsley. Serve with cranberry sauce, cherry sauce.

Fish - Paprika, curry, bay leaf, allspice. Serve with lemon.

Hamburger - Sage, onion, nutmeg, pepper, oregano.

Stews - Bay leaves, chili, cloves.

Eggs - Pepper, paprika, onion.

Asparagus - Lemon juice.

Beans, green - Lemon juice, nutmeg, onion.

Broccoli - Lemon juice.

Cabbage slaw - Cream with lemon and sugar, nutmeg.

Carrots - Parsley, mint, nutmeg, glazed with unsalted butter and sugar.

Cauliflower - Nutmeg.

Corn - Green pepper, tomatoes, onion.

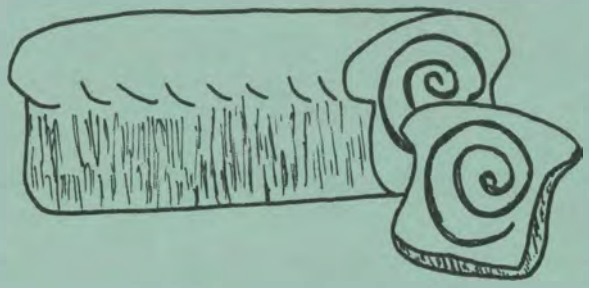
Peas - Mint, onion.

Potatoes - Parsley, pepper, chopped green pepper, onion.

Squash - Cinnamon, nutmeg.

Sweet potatoes - Cinnamon, nutmeg, escalloped with apples.

Fruits and puddings - Cloves, cinnamon, allspice, ginger, nutmeg, vanilla, lemon juice, brown sugar.



BREADS

Use your favorite yeast bread recipe without adding salt (or baking powder). In mixing, add half the required flour to the liquids to make a batter. Divide the batter into several portions. Into one add cornmeal, into another add oatmeal, put whole wheat flour into another, etc. (If you have 2 cups of batter in each portion, you can add about one cup of the other grain.) Add white flour to make a dough you can handle and proceed as usual.

CINNAMON BREAD

Make a white yeast bread dough without adding salt (or baking powder). Roll the dough required for one loaf into a rectangle 6 x 10 inches and 1/2" thick. Brush with vegetable oil. Sprinkle with a mixture of 1/3 cup sugar and 2 Tb. cinnamon. Roll up, pinch ends and edges together, flatten ends and turn them under. Put into a greased loaf pan. Let rise. Bake at 375 degrees for one hour or until the crust is light brown.

BROWN AND SERVE ROLLS

Make your regular yeast bread, using no salt and no baking powder. Shape into rolls as usual and let rise to about 3/4 as high as regular rolls. Bake in slow oven (275 degrees) for 40 minutes (loaves must bake about 1¼ hours). Cool at room temperature. Wrap in waxed paper and store in refrigerator for as long as two weeks: or in the breadbox for one week: or wrap in for freezing and store frozen for as long as three months.

To use: Place rolls on ungreased baking sheet and brown (about 7 minutes) at 450 degrees.

Make brown and serve cinnamon rolls by rolling dough out to 1/2" thick, brush with vegetable oil and sprinkle generously with cinnamon and sugar. Roll like jelly roll, cut into 3/4" inch segments and let rise to not quite double in bulk. Bake as for brown and serve rolls as directed above.

Colorado State Department of Public Health