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STATUS AND TRENDS OF DIETETIC STAFFING IN KANSAS  
HOSPITALS AND NURSING HOMES

by

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B.S., Kansas State University, 1977

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A MASTER'S THESIS

submitted in partial fulfillment of the  
requirements for the degree

MASTER OF SCIENCE

Department of Dietetics, Restaurant  
and Institutional Management

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1983

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## ACKNOWLEDGMENTS

Sincere appreciation is expressed to Dr. Allene Vaden for her guidance and professional expertise throughout this research. Gratitude is also extended to Dr. Canter and Dr. Dayton for their contributions as committee members.

Recognition and appreciation is expressed to the hospital and nursing home administrators who so willingly gave their time to participate in the study. Also, I would like to acknowledge the contributions of Marilyn Lucas and Susan Meredith during the initial phases of the research.

Deep appreciation is extended to my husband, family, and friends for their continuous love, understanding, and encouragement throughout my graduate study. It was through their many sacrifices that made the completion of this thesis possible.



## TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS . . . . .	ii
LIST OF TABLES . . . . .	vi
LIST OF FIGURES . . . . .	viii
INTRODUCTION . . . . .	1
REVIEW OF LITERATURE . . . . .	4
Human Resource Planning . . . . .	4
Human Resource Planning Defined . . . . .	4
Implementation of a Human Resource Planning System . . . . .	5
Forecasting Human Resource Needs . . . . .	6
Human Resource Development in Health Related Professions . . . . .	7
Definition of Health Personnel . . . . .	9
Historical Trends in Health Personnel Employment . . . . .	10
Human Resource Planning in Health Care . . . . .	11
Projecting Future Health Personnel Labor Supplies . . . . .	11
Demand Analysis . . . . .	12
Professional Standards Method . . . . .	13
Physician-population Ratio Method . . . . .	13
Economic Demand Method . . . . .	14
Service Targets Method . . . . .	14
Health Personnel Policies . . . . .	15
Legislation Affecting Allied Health Profession . . . . .	16
Human Resources in Dietetics . . . . .	18
National Studies of Human Resources in Dietetics . . . . .	18

	Page
State/Regional Studies . . . . .	21
Studies in Kansas . . . . .	23
Standards for Staffing in Dietetic Service Departments of Adult Care Homes and Hospitals . . . . .	25
Social Security Act . . . . .	25
Accreditation and State Licensure . . . . .	26
Medicare and Medicaid . . . . .	27
Kansas Standards . . . . .	30
METHODOLOGY . . . . .	32
Development of the Instruments . . . . .	32
Hospital Questionnaire . . . . .	33
Nursing Home Questionnaire . . . . .	33
Distribution of Instruments . . . . .	34
Data Analysis . . . . .	35
RESULTS AND DISCUSSION . . . . .	36
Distribution of Health Care Facilities . . . . .	36
Survey of Health Care Facilities . . . . .	46
Characteristics of Health Care Facilities . . . . .	46
Dietetic Staffing . . . . .	51
Number and Type of Positions . . . . .	51
Salaries . . . . .	54
Dietetic Consultants . . . . .	56
Budgeted Vacant Positions . . . . .	58
Projections on Changes in Dietetic Positions . . . . .	60
Ratings of Dietetic Services . . . . .	60
SUMMARY AND CONCLUSIONS . . . . .	69

REFERENCES . . . . .	74
APPENDIXES . . . . .	80
A. Questionnaire Evaluation . . . . .	81
B. Research Instruments . . . . .	84
C. Correspondence . . . . .	89

## LIST OF TABLES

Table	Page
1. Characteristics of Kansas hospitals . . . . .	48
2. Characteristics of Kansas nursing homes . . . . .	50
3. Number of full- and part-time dietetic practitioners employed in Kansas hospitals . . . . .	52
4. Number of full- and part-time dietetic practitioners employed in Kansas nursing homes . . . . .	52
5. Position title of director of foodservice in Kansas hospitals and nursing homes . . . . .	53
6. Type of training of dietetic assistant/foodservice supervisor employed in Kansas hospitals and nursing homes . . . . .	54
7. Current annual starting salary for dietetic personnel in Kansas hospitals and nursing homes . . . . .	55
8. Data on dietetic consultation in Kansas hospitals and nursing homes . . . . .	57
9. Number of unfilled dietetic positions in Kansas hospitals and nursing homes . . . . .	58
10. Number of unfilled full- and part-time positions in Kansas hospitals by health district . . . . .	59
11. Number of unfilled full- and part-time positions in Kansas nursing homes by health district . . . . .	60
12. Projections of Kansas hospital administrators on changes in dietetic positions over the next five years . . . . .	61
13. Projections of Kansas nursing home administrators on changes in nursing home dietetic positions over the next five years . . . . .	61
14. Administrators' ratings of hospital dietetic department . . . . .	62
15. Administrators' ratings of nursing home foodservice department . . . . .	62

Table	Page
16. Administrators' ratings of problem areas in hospital foodservice . . . . .	63
17. Administrators' ratings of problem areas in nursing home foodservice . . . . .	65
18. Nursing home administrators' ratings of importance of consultant dietitians' activities . . . . .	66

## LIST OF FIGURES

Figure	Page
1. Health districts in Kansas defined by the Department of Health and Environment . . . . .	37
2. Population of counties in Kansas . . . . .	38
3. Distribution of hospitals in Kansas by county . . . . .	40
4. Hospital beds in Kansas by county and district . . . . .	41
5. Ratio of number of hospital beds to population by health district . . . . .	42
6. Distribution of nursing homes in Kansas by county . . . . .	44
7. Nursing home beds in Kansas by county and district . . . . .	45
8. Ratio of number of nursing home beds to population by health district . . . . .	47

**THIS BOOK  
CONTAINS  
NUMEROUS PAGES  
WITH MULTIPLE  
PENCIL AND/OR  
PEN MARKS  
THROUGHOUT THE  
TEXT.**

**THIS IS THE BEST  
IMAGE AVAILABLE.**

## INTRODUCTION

The health service industry has become one of the largest and most important in the United States in terms of total costs, employment, and federal expenditures (1). Factors contributing to the increased use of health care services include population growth, changes in private insurance coverage, and the intensifying role of the federal government to provide better access to health care (2). To meet the public mandate for health care that is accessible, available, comprehensive, and equitably distributed to all citizens requires optimal use of existing and future health personnel (3).

Hall and Mejia (4) defined health personnel planning as a process whereby health personnel development, goals, objectives, priorities, and activities are determined in a systematic fashion, to ensure that current and future health personnel resources are adequate to meet the requirements for delivery of health services to a population. They contended that health personnel planning consists not only of projecting the numbers of personnel required, but also in planning properly designed health services with the quality and quantity of personnel needed.

According to Walker (5), effective human resource planning is a process of analyzing an organization's human resource needs under changing conditions and developing the activities necessary to satisfy them. He further stated that the term human resource planning implies a broader scope than merely supply/demand balancing or quantitative forecasting. In addition, the term has gained favor as a way to minimize the sexist



implication of manpower and to emphasize the positive view of personnel as a basic organizational resource.

The American Dietetic Association has long had an interest in human resource issues. According to Hekeler (6) and Fitz (7), several recent transformations in the health care system of the United States have added breadth to the Association's concern. First, excess demand for the services of the physician, nurse, and dentist have given rise to a need for additional specialized health personnel. New knowledge in the biomedical sciences has increased the number of possible patient care services. The growth of larger health care institutions which have centralized care in the community has increased the scale of operations and potential for greater specialization. Finally, acceptance of health care has increased due to changing concepts in disease management. Hekeler reported that these changes when viewed in the context of dietetics imply differentiation of roles, demand for new competencies, delegation of certain tasks and roles to trained staff, and cooperation with other health professionals. The Association recognizes that changing times require it to pay closer attention to the issues of demand for services and consequent personnel requirements.

In 1979, Cohen (8) surveyed professional dietetic personnel in Kansas to assess the availability of consultant services for small hospitals and nursing homes. Because of the constantly changing status of personnel she recommended that periodic studies be conducted to update the data on Kansas dietitians. Also, surveys of institutions in the state to determine vacancies and projected needs for dietetic personnel were suggested.

The objective of this study was to examine the current and projected supply of and demand for dietetic personnel available in the state of

Kansas. This current human resource data base will aid in assessing the demand on educational institutions that provide training or educational programs, examining the current and projected dietetic employment opportunities, and identifying regions within the state that are understaffed.

## REVIEW OF LITERATURE

### Human Resource Planning

Peterson (9) asserted that the challenge of providing the personnel needed for total health care has generated interest and further research in human resource planning. This increased attention is particularly true at the national level where the federal government has attempted to improve the situation through such legislation as the Manpower Training and Development Act and the Economic Opportunity Act. In conjunction with these various programs, the United States Department of Labor has attempted to estimate the long-term needs for various occupations.

According to Dickey (10, 11), general societal trends, national policies and priorities, and changes internal to the health care delivery system itself are gathering momentum and seem to be converging to create a changed environment for health service delivery. Within the changed environment, indications are that allied health personnel will play an increasingly important role as the value of the services they provide are more widely recognized.

#### Human Resource Planning Defined

Lynch (12) described human resource planning as the attempt to determine gross personnel needs and how these needs translate into talent and skill requirements. He stated that human resource planning is required to discover what has to be done, why it has to be done, what the barriers are to its being done, and how these barriers can be overcome.

Bryant et al. (13) found that the success of human resource planning is dependent on the proper coordination of numbers, talents, times, places, and objectives. Brown and Sommerville (14) indicated that the success of a human resource system lies in its ability to identify measures that can overcome imbalances in supply and demand. They cited some of the benefits of a successful human resource planning system as provision of a better basis for planning employee development, improvement in the overall planning process, and availability of a tool to evaluate the effects of alternative manpower actions and policies. According to Walker (5), effective human resource planning is a process of analyzing an organization's human resource needs under changing conditions and developing the activities necessary to satisfy them.

#### Implementation of a Human Resource Planning System

Lynch (12) stated that a human resource plan should be directed towards a goal. The main steps in the planning process are defining needs, analyzing trends, and predicting courses of action. He emphasized that skill is the basic unit upon which human resource planning centers its attention. According to Walker (15), human resource planning should begin with forecasting personnel needs based on operating plans and budgets. The planning period is usually six to 18 months for short range planning and between two to five years for intermediate range planning.

Brown and Sommerville (14) contended that a successful human resource planning system must include three major objectives:

- projecting demand for and potential supply of hourly and salaried personnel at every skill, salary, or job-classification level within the organization at any future time,
- determining how the projected supply of personnel compares to the anticipated demand to ensure that specific personnel programs,

policies, and procedures can be set up in time to guarantee the availability of necessary human resources, and

- functioning as a necessary prelude to sound business planning

Deckard and Lessey (16) suggested that human resource planning includes three activities: forecasting, decision-making, and actions. They asserted that an organization needs to reappraise, on a continuing basis, what it has in personnel strength and at the same time estimate what it will need to fulfill its purposes and objectives.

### Forecasting Human Resource Needs

Peterson (9) cited the following information as essential in the preparation of a worthwhile human resource forecast: (a) analysis of past and present process development, (b) evaluation of major plans regarding future products, processes, and services, (c) awareness of technological developments that may affect the organization, and (d) evaluation of past and present work force. He reported that the future of human resource forecasting hinges on the amount of information provided by other functional areas concerning short- and long-term planning.

Peterson (9) defined human resource forecasting as research for the purpose of estimating the size and characteristics of the work force at some future point in time. Human resource forecasting as defined by Bryant et al. (13) refers to the process of anticipating the future size and nature of the personnel force. Deckard and Lessey (16) similarly defined human resource forecasting as predicting the need for and the availability of people to perform the management function for some future time period. They differentiated between human resource planning and forecasting methods by stating that forecasting methods describe the

situation to be controlled while personnel planning describes how to control the situation.

Ahamad and Blaug (17) cited the reason human resource forecasts have been made is to avoid "bottlenecks" in economic growth arising from absolute shortages of educated personnel or to reduce relative shortages of particular types of personnel coexisting with relative surpluses of other types. According to Kast and Rosenzweig (18), as the time element is extended forecasting becomes increasingly hazardous and more subjective but remains an essential ingredient in the planning process.

#### Human Resource Development in Health Related Professions

The National Advisory Commission on Health Personnel (19) reported that the adequacy of health services depends as much upon the organization of health personnel and their combination with other resources as it does upon the total number of health personnel. Human resource studies in the health related profession are concerned with three major areas: (a) the specialty - location distribution of health personnel, (b) the quality of new personnel entering the health field, and (c) the impact of professional training on quality and distribution (1). According to Hiestand and Ostow (20), the focus of human resource policy discussions shifted from the concern with general shortages that was characteristic of the 1960's to an emphasis on questions of distribution in the 1970's. Specifically, the problem has become one of selective imbalances and the possibility of concurrent shortages and surpluses as one compares different geographic locations and occupations or workers with different levels of training within the same occupational field.

Hekeler (6) reported that changes in lifestyle emphasizing greater levels of physical activity, increasing information, and a willingness to experiment will set the stage for continued interest in preventive medicine. Although the use of health services will undoubtedly continue to increase in the future, the National Commission on Allied Health Education's Advisory Panel on Health Services Needs concluded (10, 11) that the demand for health services would increase at a decreasing rate. The Commission reached this conclusion after careful analysis of various counterforces, including consideration of general social trends, disease prevention, health education, access to health care, expanded concept of health, reimbursement patterns, and new technology.

According to Dickey (10, 11) some form of national health insurance will likely be in place by 1990 and a comprehensive health insurance plan by the year 2000. National Health Insurance will have an impact on the configuration of health services through an increase of services in the ambulatory setting, some of which will be substitutive for existing inpatient services, and growing social pressure to meet the custodial needs of the elderly in an institutionalized setting.

Dickey (10, 11) contended that new challenges face allied health education in the 80's. Communication, cooperation, and collaboration have become an absolute necessity in an era characterized by public intolerance of waste. Although much good has resulted from increased formalization of allied health, the national concern for accountability forces the question of whether more and more formal education for all health personnel is in the best interest of the health care system and society as a whole. Finally, he contended that placing the needs of health care as a whole

above those of individual occupations is no longer just an admirable goal but rather, is essential for the survival of the health care industry.

#### Definition of Health Personnel

Goldstein and Horowitz (21) defined health personnel as workers in the health care industry ranging from the unskilled to the professional and administrator. They used the term allied health to include all those persons in the industry who directly relate to the patient.

The National Commission of Allied Health Education endorsed the definition of allied health personnel as all health personnel working toward the common goal of providing the best possible services in patient care and health promotion. The term "allied health education" was used to refer to the formal preparation of a sizeable segment of the health workforce, the composition of which varies depending on the occupations included as allied health (11).

Although agreement is not unanimous as to which occupations are considered professional and which are entry-level positions, a number of factors can be used to differentiate between the two classifications according to Goldstein and Horowitz (21). They cited the following criteria as useful in classifying professional:

- certification or licensing
- formal education and examination
- adoption of code of professional performance and ethics
- presence of a body of systematic scientific knowledge and/or technical skill
- individuals within the category function with some degree of autonomy under the assumption that they have the expertise to make decisions in their area of competence.

Weigley (22) cited specific characteristics acquired by an occupation in



the process of professionalization: the development of a professional association with membership requirements to bar the unqualified; practitioners control of education and admission to the profession; certification or licensure may serve as a further control; and a code of ethics with a service orientation is developed.

#### Historical Trends in Health Personnel Employment

Dramatic changes in the types and characteristics of health personnel have occurred in the twentieth century. The health professions requiring college education or professional preparation was estimated to account for approximately 200,000 persons in 1900. In 1920, the number of individuals in those occupations increased to 409,000; in 1940, to 692,000; in 1960, to 1,140,000; and in 1975, to an estimated 1,886,000 (1). In 1900, three out of five health professionals were physicians; by 1977 rapid growth in other occupations reduced the proportion of physicians to less than one out of 12 professional health workers (1, 21). The rapid growth of allied health occupations reflect evolving social concepts of education and professional identity, and in the health field are additionally stimulated by concern over the critical nature of the services rendered, increased regulation of the industry and its personnel, and high values ascribed to professional status by patients (23).

According to Dickey (11), the survival and growth of health services has always depended on the public belief that these services contribute to the well-being of the individual. If public trust is to be maintained, programs in allied health education must be shown to be related to practice needs, which include as the highest priority the improvement of personal well being.

## Human Resource Planning in Health Care

Baker (24) asserted that the need for health personnel planning should be self-evident due to the length of time needed to train health professionals. He developed a seven-part framework for analyzing the dimensions of health human resource planning: (a) supply analysis; (b) projection of quantity supplied; (c) demand analysis; (d) projection of quantity demanded; (e) estimation of productivity; (f) comparison of quantity supplied with quantity demanded; and (g) description of constraints in recommendation. He emphasized that the planner is only concerned with those occupations in which supply is relatively inelastic because the substantial educational and training requirements may take several years to fulfill.

According to Kriesberg et al. (25), important considerations for planning purposes are the identifying factors that could induce some of the inactive persons to reenter the labor market. These inactive persons represent a sizeable reserve force in some occupations, and under certain conditions can provide a quick and relatively inexpensive solution to an existing shortage. Sorkin (1) stated that a variety of factors could be applied to alleviate an expected shortage of health personnel: (a) increase institutions; (b) substitute auxiliary personnel for the most highly trained professional; and (c) increase the productivity of health professionals.

## Projecting Future Health Personnel Labor Supplies

Sorkin (1) reported that techniques for projecting human resource needs are more useful if they are accompanied by estimates of expected personnel availability. The simplest methods merely extrapolate from past supplies, an approach that ignores the impact of predictable changes

on the labor supply. A more sophisticated method is to derive supply estimates from assumptions about future trends in variables such as the size of the population group from which the majority of applicants are obtained, the capacity of existing training programs, death and retirement rates, and migration data. He contended that retirement rates are usually the greatest source of loss to most health professions.

Goldfarb (26) asserted that the human resource planner has three instruments available to increase the quantity supplied of health personnel: (a) increasing wages, (b) lowering educational or licensing requirements for entering a profession, and (c) enhancing the capacity of training institutions. In order to effect an increase in quantity supplied, the planner must understand how much a change in any one of these variables will affect future personnel levels.

To obtain comprehensive information about allied health personnel levels, the use of two different data collection techniques and survey instruments is recommended. For most allied health occupations, the majority of personnel are employees of health organizations and surveys of employers are needed to provide basic employment information. Detailed information on educational background, work experience, and job and geographic mobility, however, must be obtained directly from individual workers no matter what their form of employment (23).

#### Demand Analysis

Hall (27) outlined four basic methods of determining the demand or requirements for medical services: (a) professional standards, (b) physician population ratios, (c) economic demand, and (d) service targets. The planning approaches described take the prevailing level of technology as given and use simple arithmetic techniques to obtain more sophisticated

results. Planning approaches begin by defining goals or objectives and then calculating how these objectives can be achieved most effectively.

According to Hall and Mejia (4), assessment of the demand for health care is one of the most difficult tasks confronting health personnel, but an essential one. They stated that as the planning process evolves, the health planner needs to determine what variables are most correlated with the demand for personnel, how they are likely to change in the future in the absence of planned intervention, and to what degree they can be modified.

Professional Standards Method. According to Sorkin (1), the professional standards method seeks to determine demand based on expert opinion and available technology, as well as the level and quality of services required to obtain a healthy population. The need for health services can then be translated into personnel requirements by means of staffing and productivity standards. The main advantage of the professional standards method is that it is based on serving virtually all health needs, which is especially appealing for long range planning. Establishing one professional standard, however, eliminates the possibility of substituting more economically efficient mixes of inputs. Also, projections that assume everyone will receive treatment will overstate usage.

Physician-population Ratio Method. Kriesberg et al. (25) contended that the physician-population ratio method is by far the most popular and frequently used methodological approach. A ratio of the number of health personnel to the total population served is selected and then applied to the target year population. This method has been criticized widely in the human resource planning literature because such simple calculations ignore

changes in population composition and, therefore, disregard each population subgroup's differing medical demands, fail to consider the likelihood of increasing productivity of health workers, and do not consider the possibility of substituting one type of medical personnel for another.

Economic Demand Method. The economic demand method consists of relating the demand for services to selected economic and other variables and then projecting the changes likely to occur in the magnitude of these latter variables (28). A problem with this methodology is that utilization rates are held constant for each population group; therefore, the projection results will be inaccurate to the extent that a cohort utilization rate changes. Human resource planners who use this approach need either more advanced statistical procedures than are normally used or more disaggregated data than are usually available (1).

Service Targets Method. According to Sorkin (1), the first step in applying the service targets method is to determine the target for the kinds and levels of services required by the population. The personnel staffing practices are analyzed by means of a task analysis, which requires a detailed examination of job performance in which job functions are identified and separated into specific tasks. The most suitable methods and standards are used for each component activity of the sector and thus, closer adjustments to needs and demands are possible. Specifying standards based more on desires than on reality is a potential drawback, leading to major policy errors. Also, a high degree of statistical expertise may be required.

## Health Personnel Policies

Federal health personnel policies evolved in the 1960's to overcome a lack of sufficient health personnel and to provide more accessibility to health care, particularly for the aged and poor. In the early 1960's, the federal role was limited to providing funds for the construction of teaching facilities and student loans. In 1965, the federal government broadened its commitment to schools through educational improvement grants and student scholarships. At the same time, the government increased its commitment to fund biomedical research and enacted Medicare and Medicaid amendments to the Social Security Program. Allied health education was introduced into federal legislation in 1966 to increase the number of allied health personnel and to improve and expand education and training in this field (29).

According to McTernan (30), many contemporary analysts and philosophers of health care believe that the efforts of the 1960's and 1970's to expand the health personnel pool were remarkably effective. The recently published report of the Graduate Medical Education National Advisory Committee (GMENAC) predicted a surplus of 70,000 physicians above those required to provide physician services by 1990 (31). The surplus in physicians is occurring at the same time as an explosion in the training of nonphysicians who supply services traditionally provided by physicians (32).

The recognition of the surplus of physicians and concurrent attenuation of all federal health personnel support programs is already being translated into public policy. According to Dickey (11), the national concern for the 1980's should be on the quality of health services and on

the effectiveness and efficiency of modes of preparing health personnel to deliver these services.

#### Legislation Affecting Allied Health Profession

According to Piper (33), the Allied Health Professions Personnel Training Act of 1966 was the first federal legislation specifically designed to increase the number of allied health personnel and to improve and expand education and training in this field. The Act provided for several different types of grants: Basic Improvement Grants, Traineeship Grants for Advanced Training, Developmental Grants, and Construction Grants. The Basic Improvement Grants were designed to increase the number of persons prepared to fill staff positions and to strengthen and improve the educational quality of the curricula. Dietitians were among the nine allied health professions eligible for support at the baccalaureate or graduate levels of training under these programs. Dietetic technicians were included in the 12 allied health professions eligible for support at the associate degree or equivalent level.

The Bureau of Health Personnel, established on January 1, 1967, created for the first time in the federal government a major organizational unit to focus attention on health personnel problems. The Bureau was given primary responsibility for evaluating available health personnel needs and resources, stimulating improved health personnel utilization, exploring needs for new kinds of personnel, and supporting innovative improvement in professional and technical education (33).

The Health Personnel Act of 1968 modified the language of the section on Developmental Grants to broaden the purpose to include support for the development of educational methods for known as well as new technologists. The Act broadened authority for Developmental Grants and enabled the



consideration of a wider range of projects and made resources available for instructional programs for dietitians and dietetic technicians (33).

By 1970, the Carnegie Commission and others were predicting critical shortages of as many as 50,000 doctors (34-38). Congress responded with the Comprehensive Health Manpower Training Act of 1971 (PL 92-157), in effect during the years 1971-1976. The Act provided four major types of financial assistance: construction support, institutional aid, student loans and scholarships, and funding for special programs (35).

In October 1976, President Ford signed HRS546, a major piece of health personnel legislation. The Act was the first important change for medical education since 1971. Major provisions of the Act are listed below (1).

1. Only exceptionally needy students were eligible for the direct loan program.
2. Schools were eligible for capitation funds only if they ensured that an increasing percentage of first-year residencies in hospitals were in primary care.
3. Federal support for the construction of medical training facilities was cut drastically to 40 million annually from 1978-1980.

Changing estimates in the number of future doctors was a major factor in the 1980 drive to cut federal aid to medical schools (36). In 1980, Congress failed to reauthorize federal aid for medical schools and other education programs for health professionals. Since the reauthorization measure was not approved, programs in the bill were funded at fiscal 1980 levels through June, 1981 (37).

In 1981, Congress substantially reduced federal spending for the education of doctors, nurses, and other health professionals. It made the cuts as part of the budget reconciliation bill (PL 97-35). Although



Congress reauthorized loans and other aid for health manpower training, it provided less than half the amount spent in fiscal 1980 (38).

### Human Resources in Dietetics

A number of authorities in the field have recommended the need for dietitians to delegate some activities to enable them to perform more effectively in a professional role (39-42). In response to this need, the Association identified two categories of supporting personnel for the dietitian: the dietetic assistant and the dietetic technician (43-45). The dietetic technician was viewed as one who assists the dietitian and the dietetic assistant was envisioned as working under the direction of a dietetic technician or dietitian (43, 44). To facilitate clarity and consistency in the use and meaning of titles in the dietetic profession, the following list of definitions was developed by ADA (45).

- Registered Dietitian: a technically skilled person who has completed successfully the registration examination and maintains continuing education requirements.
- Consultant Dietitian: a professionally educated and qualified person who guides the group care facility in the operation of a safe foodservice that provides nursing home residents with enjoyable meals which meet their nutrition and therapeutic needs.
- Dietetic Technician: a technically skilled person who has completed successfully an associate degree program meeting the educational guidelines established by ADA.
- Dietetic Assistant: a skilled person who has completed successfully either a high school education or equivalent and a dietetic assistant program meeting the standards set by ADA.

### National Studies of Human Resources in Dietetics

The need to obtain human resource data was evident as far back as 1962, when a questionnaire sent to the total membership population resulted in a 63 percent return (46). Follow-up surveys were done in

1967 and 1972 (47, 48). At that time, the need to streamline central office procedures and have continuous information led to the adoption of a computer system capable of handling membership records. To maintain the human resource data, in 1969 the ADA Executive Board approved the development of a comprehensive and continuous annual data collection system (48).

The 1962 study indicated that a large pool of dietitians were not employed at the time of the survey but intended to return to work within the immediate or foreseeable future. This finding led the Executive Board (46) to report that one of the most challenging problems the Association faced was the determination of how to establish educational and experience requirements not only for membership but for maintaining professional competency of members. They recommended that every affiliated association determine within its own membership the name and location of every dietitian employed and not working. Also needs were recognized to accelerate efforts to provide workshops for meeting the needs of various groups and to promote a close working relationship between colleges, universities, junior colleges, and affiliated dietetic associations.

In 1967, a follow-up survey was sent to the total membership (47). Results indicated that 66 percent of those not working in dietetics said they expected to return to work within five years as compared to 57 percent in 1962. Also, the percentage of members not working fell from 38 in 1962 to 32 in 1967. This reflected the number of homemakers serving on a part-time basis as consultants to extended care facilities, a phenomena developing after implementation of the Medicare programs in the mid 1960's.

In 1972, an updated questionnaire was sent to each member with the annual dues bill (48). The results indicated that approximately one-fourth of the members were not employed and could be considered to be a

potential pool of dietetic personnel for the present and future. Data showed that increasing numbers of members were obtaining advanced degrees. Changes in position requirements and the need to keep current with the rapid advances in knowledge with their concomitant influences on health care practice were postulated as reasons for the trend in the profession.

According to Hekeler (6), a major impediment to ADA's taking an active role in predicting demand has been a lack of quantitative and qualitative information regarding the demand for dietetic practitioners. He stated that through ADA's predominance in the profession of dietetics and its strength in the developmental aspect of human resource planning, the Association has the ability to regulate the flow of new entrants into the profession and reeducate present practitioners. To fulfill this role, a requisite understanding of the demand for its services is needed. The Association's recognition that changing times require that it pay closer attention to the issues of demand for services and consequent personnel requirements prompted the dietetic human resource study in 1980. The dietetic demand study had five key objectives:

- provide the ADA Board of Directors with a quantitative estimate of the demand for dietetic practitioners through 1985 and 1990 for all present practitioner level.
- identify and provide demand areas of potential development for the profession in which the ADA should encourage the preparation of practitioners in the future.
- prepare the way for more definitive studies regarding demand and supply projections for dietetic personnel.
- focus the assessment of demand for dietetic services on the needs/wants of service clients and institutional employers.
- provide project reports structured to maximize the flow of study information to dietetic practitioners, their employers, and health care policy makers.

Pazder (49) prepared a discussion paper for the Dietetic Manpower Demand Study to identify the specific technologies that will have an impact upon the field of clinical dietetics and the potential implication for the profession and its development. She contended that through advances in food technology, biomedical engineering, pharmacology, and medicine, several therapeutic diets may be eradicated from the clinical repertoire leaving time for more in-depth and technical forms of patient assessment.

According to Hoover (50), utilization of computer applications is increasing in both health care and in dietetics. As a result of the trend, a questionnaire was formulated to seek information about labor requirements for computer systems in dietetic departments in hospitals and to confirm the types of applications being utilized in these departments. The survey results indicated that the number of dietitians had not been reduced in any of the hospitals due to implementation of the computer system. The computer applications system enabled the staff to spend more time with patients and improve services.

The opportunities for dietitians in private industry are expanding. To assess the demand for dietetic practitioners in the private sector of the foods, foodservice, and related industries, interviews were conducted with recruiters, dietitians employed by private corporations, and senior executives in target industries. The interviews indicated that the demand for dietitians in business and industry exceeds the supply of qualified dietetic practitioners (51).

#### State/Regional Studies

Several states have conducted human resource studies to assess the status of dietetic personnel. The Michigan Dietetic Association (52)

sends out a questionnaire each year with the annual ADA due bills. This annual analysis provides data for determining educational needs of the members, planning curricula for educational programs, and predicting future personnel needs of the profession in that state.

The School of Home Economics at the University of Washington (53) conducted a survey in 1975 to provide information on the current dietetic personnel in the Pacific Northwest region which includes the states of Washington, Alaska, Montana, Idaho, and Oregon. The primary goals of the project were to: (a) identify the geographic location and distribution of dietitians by position-type; (b) project the dietetic personnel needs for this region through 1980; (c) identify states with the greatest professional need to establish state quotas for admittance to the Coordinated Undergraduate Program in Clinical Dietetics at the University of Washington and project future faculty needs; and (d) identify persons who were not ADA members, their educational background, and the number of available professional positions held by these individuals.

The passage of the National Health Planning and Resources Act of 1974 prompted Oregon dietitians to respond to health care planning. Data were compiled according to location of dietitians in the various categories in the different cities of the State (54). In 1976, a dietetic human resource survey was conducted by the Bureau of Health Statistics, the Bureau of Community Health Services, and the Wisconsin Dietetic Association (55). They presented the data from the study according to employment activities, educational background, demographic characteristics, and county and health services area of employment.

In a human resource study done by Lareau (56) in 1976, the California Dietetic Association members and administrators of employed members were

surveyed. The study was designed to determine the number and types of dietitians that would be needed in California through 1986 and the needs for in-service and advanced degree programs.

Goers et al. (57) conducted a human resource study covering all licensed health care facilities in the state of Minnesota. The objectives were to determine qualification and type of personnel supplying dietetic service in counties without dietitians, make projections for future demand, identify regions that were understaffed, and determine for which positions health care facilities had difficulty in obtaining dietetic personnel.

#### Studies in Kansas

In 1979, Cohen (8) surveyed the professional dietetic personnel in Kansas to assess the availability of consultant services for small hospitals and nursing homes. As an adjunct to the study, a survey of the state dietetic associations was conducted to determine types of human resource studies conducted in various states.

The Kansas Task Force for Career Laddering (58) was appointed by the Kansas Dietetic Association to: (a) address future directions and needs of dietetic education in Kansas; (b) identify locations for proposed education programs; (c) study dietetic human resource needs and assume a leadership role; and (d) make recommendations concerning the development of a statewide ladderred dietetic education program. To meet these requirements, a survey was developed by the Career Laddering Task Force to include information on coursework and program development needed in planning dietetic education. The survey included dietitians, dietetic technicians, dietetic assistants, and administrators of licensed health care facilities in the state of Kansas. The survey results indicated a

need for all levels of dietetic personnel in Kansas with greater needs found in the Kansas City region. Also, a greater need was found for clinical dietitians and nutrition care technicians in the future as compared to other specialities. A need to expand educational opportunities for technicians was identified. The researchers concluded that dietetic technicians may satisfy many of the manpower needs if appropriate numbers of technicians can be supplied through education programs.

In 1982, Adam (59) conducted a study to investigate the current status of Kansas dietitians for comparison with data from the Cohen study and with national data to identify trends and changes. An additional objective was to identify the continuing education experiences and perceived continuing education needs of dietitians in Kansas. Age and employment data indicated that there were a fairly large number of young professionals practicing dietetics in the state of Kansas. She postulated that this trend may be related to the increasing percentage of dietitians achieving ADA membership through a coordinated undergraduate program in dietetics in Kansas. Data on consulting indicated an increase in the percentage of consultant dietitians in 1982. The data also revealed that consultants, as well as those currently not consulting, were interested in obtaining additional accounts indicating some ability of the profession to meet health care needs for small institutions. The small percentage of unemployed dietitians actively seeking a position (less than 1 percent) coupled with 13 percent who are retired or will retire within the next five years suggests that educational programs should continue to prepare graduates at the same or an increased level to provide for adequate dietetic human resources in the state in the near future. Also, in order for dietitians to maintain and enhance competency levels, she recommended



that educational institutions and other organizations plan educational activities for practitioners directed to identified needs.

#### Standards for Staffing in Dietetic Service Departments of Adult Care Homes and Hospitals

Robinson (60) reported that for some time dietitians employed as consultants in governmental and voluntary agencies offered services to nursing homes but these contacts had been infrequent. She reported that several factors brought about an increased demand for dietitians to provide service on a part-time or regular consulting basis. Those include the enactment of federal legislation relative to health insurance for the aged, an increase in the number and size of nursing homes and related facilities, and the development of extended care facilities for post-hospital care.

#### Social Security Act

According to Smith (61), the Social Security Act of 1935 had a monumental effect in changing the direction of the nation's efforts to assist needy persons of all ages. She stated that one part of the law empowered the federal government to provide categorical assistance for the needy which enabled the eligibility of indigent elderly and disabled persons for monthly assistance payments.

Smith (61) reported that the Social Security Amendments of 1950 established the beginning of a system for direct payments to providers of health care for welfare recipients. She stated that after this legislation was passed most states not only had hospital codes and licensing programs but they began to develop some form of nursing home licensure. In the late 1950's and early 1960's, the Public Health Service was



authorized by Congress to make grants to state licensure agencies for improvement of nursing home services. These grants enabled many state agencies to employ one or more dietitians for licensure divisions.

#### Accreditation and State Licensure

In 1951, the Joint Commission on Accreditation of Hospitals (JCAH) was developed as an outgrowth of the Hospital Standardization Program established by the American College of Surgeons in 1918. JCAH was formed to encourage the formation of a uniform medical record format that would facilitate accurate recording of a patient's clinical course. Its function was to help hospitals identify both their strengths and weaknesses in regard to the JCAH standards and provide guidelines for improvement through consultation. The standards on staffing in the hospital dietetic department require that the nutritional aspects of patient care shall be supervised by a qualified dietitian who is registered by the Commission on Dietetic Registration or has the documented equivalent in education, training, and experience with evidence of relevant continuing education (62).

A major milestone which contributed to the development of licensure was the Hospital Survey and Construction Act of 1946, commonly known as the Hill Burton Act. This law required states to develop minimum standards for the construction and maintenance of public or nonprofit hospitals and long care facilities utilizing federal Hill Burton funds (61).

All states now require licensure of nursing homes. While licensure has done a great deal to improve the operating conditions in nursing homes throughout the United States, different sets of laws, rules, and

regulations led to the need for a nationwide uniform standard of accreditation superimposed on the foundation of state licensure (63).

The National Council for Accreditation of Nursing Homes was organized in the spring of 1963 by the American Medical Association and American Nursing Home Association. According to Jacobs and Morris (63), the effectiveness of the program depends on several factors:

- continued high prestige of the national council,
- objectivity with which it carries on its program,
- the availability of a sufficient number of accreditation facilities to permit broad coverage on a nationwide basis by large insurance groups,
- continued support of the medical profession, and
- enlightened discriminating public.

#### Medicare and Medicaid

In 1965, Title XVIII and XIX of the Social Security Act, under Public Law (PL) 89-97, established the Medicare and Medicaid programs. Hospitals participating in the program were to maintain the level of patient care that had come to be recognized as the norm (64). The Conditions of Participation for Hospitals in the Medicare Act specifically referred to the JCAH standards (62). Under the Conditions of Participation for Hospitals (65), the dietetic service department must be under the supervision of a qualified dietitian who is responsible for quality food production, service, and staff education. The dietitian may serve on a full-time basis or in smaller hospitals, on a regular part-time supervising or consulting basis. The 1965 legislation resulted in the provision that hospitals accredited by the Joint Commission were automatically decreed to be in compliance with the federal Medicare Conditions of Participation and, thus, eligible for participation in Medicare (62).

Under Medicare, nine standards relate to dietetic services in the Conditions of Participation for Extended Care Facilities. Smith (61) reported that these Conditions of Participation represented the highest and most comprehensive set of nursing home standards for most of the United States. As specified in the Conditions (66), the standard for dietary supervision required that a person designated by the administrator is responsible for the total foodservice of the facility. If this person is not a dietitian, regularly scheduled consultation from a professional dietitian or "other person with suitable training" must be obtained. The term "professional dietitian" is defined under this standard as one who meets The American Dietetic Association's qualification standards and designates "other persons with suitable training" as those who are graduates of baccalaureate degree programs with major studies in foods and nutrition.

Federal standards for skilled nursing homes under Medicaid were published in 1969. Although the standards were less detailed than the Medicare standards for extended care facilities, they required a dietitian or nutritionist to either plan the menus and supervise the meal service or provide consultation to the person in charge of the dietary services (67).

In 1972, amendments to the Social Security Act in PL 92-603 allowed Congress to order the U.S. Department of Health, Education, and Welfare (now the Department of Health and Human Services) to develop a single set of uniform standards applicable to facilities formerly certified as extended care facilities under Medicaid and as skilled nursing homes under Medicare. The standards attempted to reflect the best current

acceptable professional practices and to further progress in the health field for skilled nursing facilities (67).

In January 1974, the Conditions of Participation-Skilled Nursing Facilities were published, creating the first federal standard to state specific educational and experience requirements for the dietetic supervisor. The dietetic staffing requirements regulate that overall planning and supervision for the entire dietetic service department shall be under the direction of a dietetic service supervisor, who shall be a qualified dietitian, or a trained foodservice supervisor, who has consultation with a qualified dietitian. The Conditions defined a trained foodservice supervisor as a person who:

- is a graduate of a dietetic technician or dietetic assistant program approved by ADA; or
- is a graduate of a state approved course that provided at least 90 hours of classroom instruction in foodservice and has experience as a supervisor in a health care institution; or
- has military experience and training equivalent to that mentioned above.

To meet the need for qualified dietetic supervisors in nursing homes, numerous ADA approved courses were established in colleges and other learning centers throughout the nation (66, 67).

In January of 1974 the regulations governing intermediate care facilities were published, creating in response to congressional legislation a new level of care to be provided under the Medicaid program (66). The regulations required that a designated staff member suited by training or experience in food management or nutrition be responsible for planning and supervision of menus and meal service. If the facility accepts or retains individuals in need of medically prescribed special diets, the

menus for such diets must be planned by a professionally qualified dietitian, or be reviewed and approved by the attending physician.

In the November 10, 1981 Federal Register, the Health Care Financing Administration (HCFA) announced its intent to publish a new set of proposed regulations to govern Medicare/Medicaid Conditions of Participation for skilled nursing facilities. The HCFA Task Force recommended that requirements for consultant dietitians and qualifications be eliminated from the new regulations because there is no hard evidence to prove that services provided by a dietitian contribute to improved patient outcome (68).

On March 21, 1982, Schweiker, Secretary of the Department of Health and Human Services, decided against making any changes in the Conditions of Participation for skilled nursing facilities. Thus, consultant dietitians continue to be retained by skilled nursing facilities under the existing 1974 regulations (69).

#### Kansas Standards

According to Smith (67), federal regulations are considered the minimum standard for the health of the Medicare/Medicaid beneficiaries. She stated that states have the privilege of promulgating higher standards for Medicare and Medicaid facilities and that a number of states have done so, especially for intermediate care facilities.

The standards and regulations for the dietetic service departments of adult care homes in Kansas were revised in 1982. The revised standards apply to both the skilled nursing homes and the intermediate care homes. These standards must be met by all nursing homes receiving Title XIX funds. The dietetic staffing requirement regulates that the overall supervisory responsibility for the dietetic services shall be assigned to

a dietetic services supervisor who shall be a dietitian or who has consultation from a dietitian (70).

## METHODOLOGY

The population for the study consisted of all licensed hospitals and nursing homes in Kansas and the greater Kansas City area in Missouri as of fall 1981. The listing of facilities was obtained from lists published by the Kansas Department of Health and Environment, Missouri Department of Social Services, and the American Hospital Association (71-76). In Kansas, the list included 168 hospitals and 366 nursing homes. In the greater Kansas City area of Missouri, 18 hospitals and 48 nursing homes were listed. Nursing homes included all classifications of homes required to be licensed by the Secretary of Health and Environment (70). These classifications include skilled, intermediate, and personal care homes and intermediate mental retardation centers (71). Administrators of these facilities were asked to complete the study survey questionnaire, which was designed to provide data on dietetic human resources.

The objective of the study was to examine the current and projected supply of and demand for human resources in the state of Kansas. The greater Kansas City area was included in the study because it is a potential source of employment for Kansas dietitians and dietetic technicians who may travel across the Missouri line for employment purposes.

### Development of the Instruments

In developing the first draft of the questionnaires, instruments from previous studies conducted by Moller and Fontana (53), Spear et al. (77), Goers et al. (57), and Lucas and Meredith (58) were reviewed. These drafts were revised by a three-member review committee and members of the

Kansas Task Force for Career Laddering the Dietetic Profession. Further revisions were made based on the comments of the reviewers.

The second drafts of the questionnaires were distributed to two hospital administrators and two nursing home administrators for review and comment. The administrators were asked to complete the questionnaire as though they were a respondent and then list any suggestions for changes on an evaluation form (Appendix A). The final revisions of the instrument were made based on the comments and suggestions of these administrators and the review committee.

#### Hospital Questionnaire

The hospital questionnaire (Appendix B) consisted of six questions describing the type of facility. The classification of hospitals included type of control, service, length of stay, and number of short- and long-term beds. These were patterned after classifications used by the American Hospital Association (73). The remaining nine questions were designed to provide information about the number and type of full- or part-time or consultant dietitians employed, the number and type of dietetic technicians and dietetic assistants employed, the number of budgeted vacant dietetic positions in the facility, and the current starting salary on a full-time basis for dietetic personnel. Also, information about the needs and/or requirements expected to influence increase or decrease the number of dietetic positions was requested, as well as an assessment of major problem areas in the foodservice department.

#### Nursing Home Questionnaire

The nursing home questionnaire (Appendix B) was coded to provide overall information about the adult care home. This information was



obtained from the Kansas Department of Health and Environment and the Missouri Department of Social Services (71, 74, 75). The first code number described the type of facility according to the following state licensure classification: skilled care home; intermediate care home; personal care home; and mental retardation center. The second code number provided information about the number of beds in the facility.

The questions in the research instrument provided information similar to that obtained in the hospital questionnaire. In addition, the adult care home administrators were asked to rate the importance of the consultant dietitian's activity, if a consultant was employed at the facility.

#### Distribution of Instruments

Cover letters which explained the purpose of the study were mailed with each questionnaire (Appendix C). Similar letters were sent to the administrators of the hospitals and nursing homes. A self-addressed stamped envelope was included to facilitate return of the instrument. Participants were asked to complete and return the questionnaire by the end of the week after receipt. Each questionnaire was numbered to identify nonrespondents for purposes of follow up. Two weeks following the initial mailing, a follow-up letter (Appendix C) and second questionnaire were mailed to those not responding to the first mailing. Because of a low return after the first mailing from the greater Kansas City administrators, the follow-up letter (Appendix C) was drafted to clarify the need for input from these administrators. Total return from the initial and follow-up mailings was 156 (84 percent) from hospital administrators and 283 (68 percent) from nursing home administrators.

## Data Analysis

Data from the hospital and nursing home surveys were studied from two perspectives. First, the number of health care beds and facilities were studied in relation to population to provide general statistical information. Second, data from the surveys of Kansas hospitals and nursing home administrators were studied to provide an in-depth description of the supply and demand of dietetic personnel in the state.

The most current lists of hospitals and nursing homes in Kansas and Kansas City, Missouri were used to determine the number of health care facilities and beds in each county and health district in Kansas. These health districts as defined by the Department of Health and Environment are as follows:

- I. Northwest
- II. North Central
- III. Northeast
- IV. Southwest
- V. South Central
- VI. Southeast
- VII. Metropolitan

The ratio of health care facilities and beds to population were computed for the whole state and by health district. The 1980 census provided the most current population data available by county.

Frequency distributions were compiled for all survey data with the exception of salary level. Means were computed for salary level and several other variables, as appropriate. Cross tabulations were compiled to determine the employment of dietetic personnel within the seven health districts.

## RESULTS AND DISCUSSION

The first part of the results section includes information pertaining to general statistical data on Kansas hospitals and nursing homes. The greater Kansas City area was included in the data because facilities in this vicinity are a potential source of employment for Kansas dietitians and dietetic technicians and assistants who may travel across the state line for employment purposes.

In the second section, results obtained from the survey of hospitals and nursing homes are discussed. Data are presented on the salary level, number of vacant and filled positions, and projected change in positions over the next five years for dietitians, dietetic technicians, and dietetic assistants/foodservice supervisors. Also included are data on the major problem areas in the foodservice department and information pertaining to the employment of consultant dietitians. In addition, the nursing home survey included the administrators' ratings of importance of consultant dietitians' activities to the facility. To assess the distribution of dietetic personnel in Kansas, employment data were analyzed according to the seven health districts (Fig. 1) defined by the Kansas Department of Health and Environment (71).

### Distribution of Health Care Facilities

In Figures 2 to 8 data are presented on the population in Kansas, number of hospitals, hospital beds, nursing homes, nursing home beds, and the ratio of health care beds to population in Kansas. These data are presented as general indicators of the distribution of population and

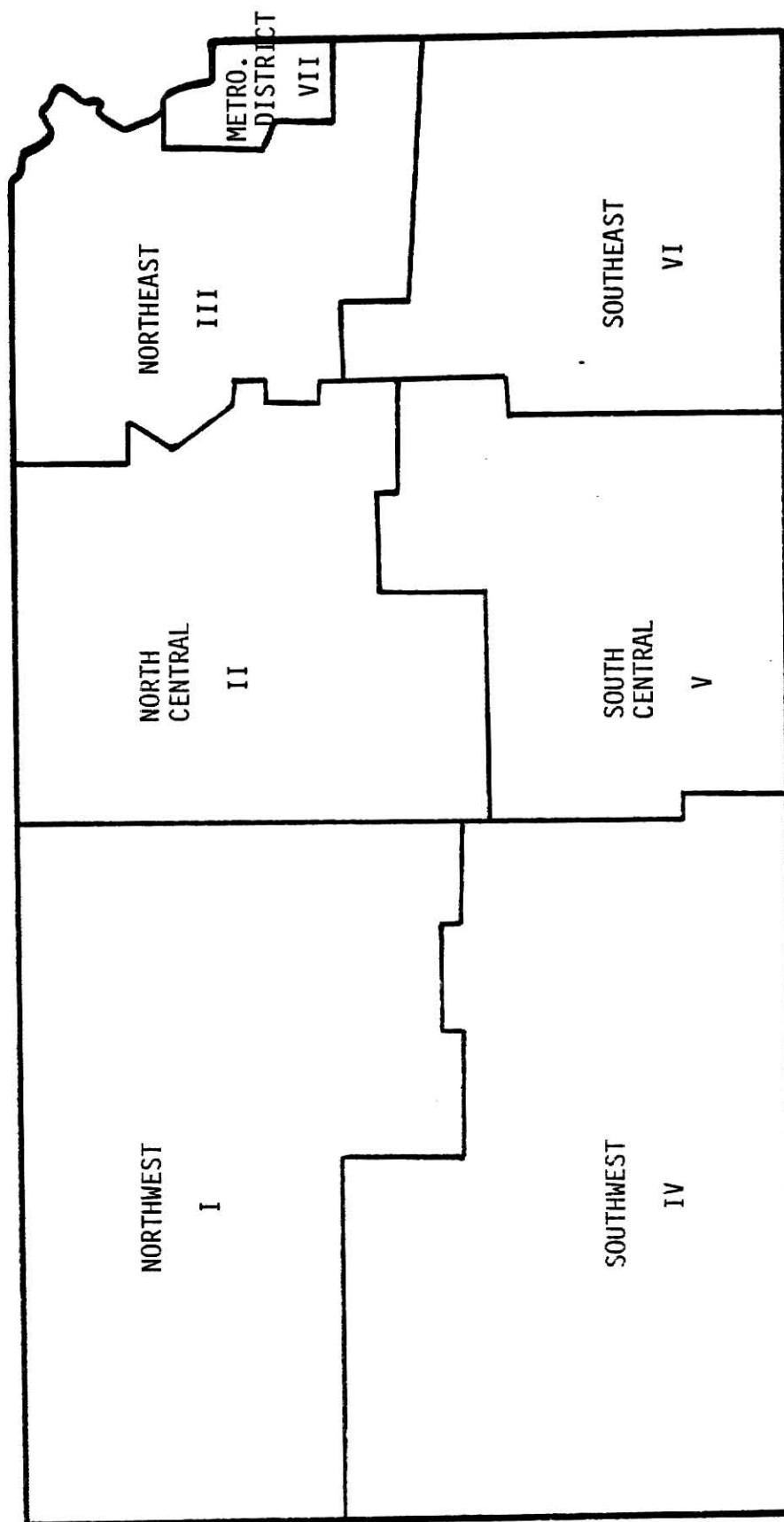


FIG. 1. Health districts in Kansas defined by the Department of Health and Environment

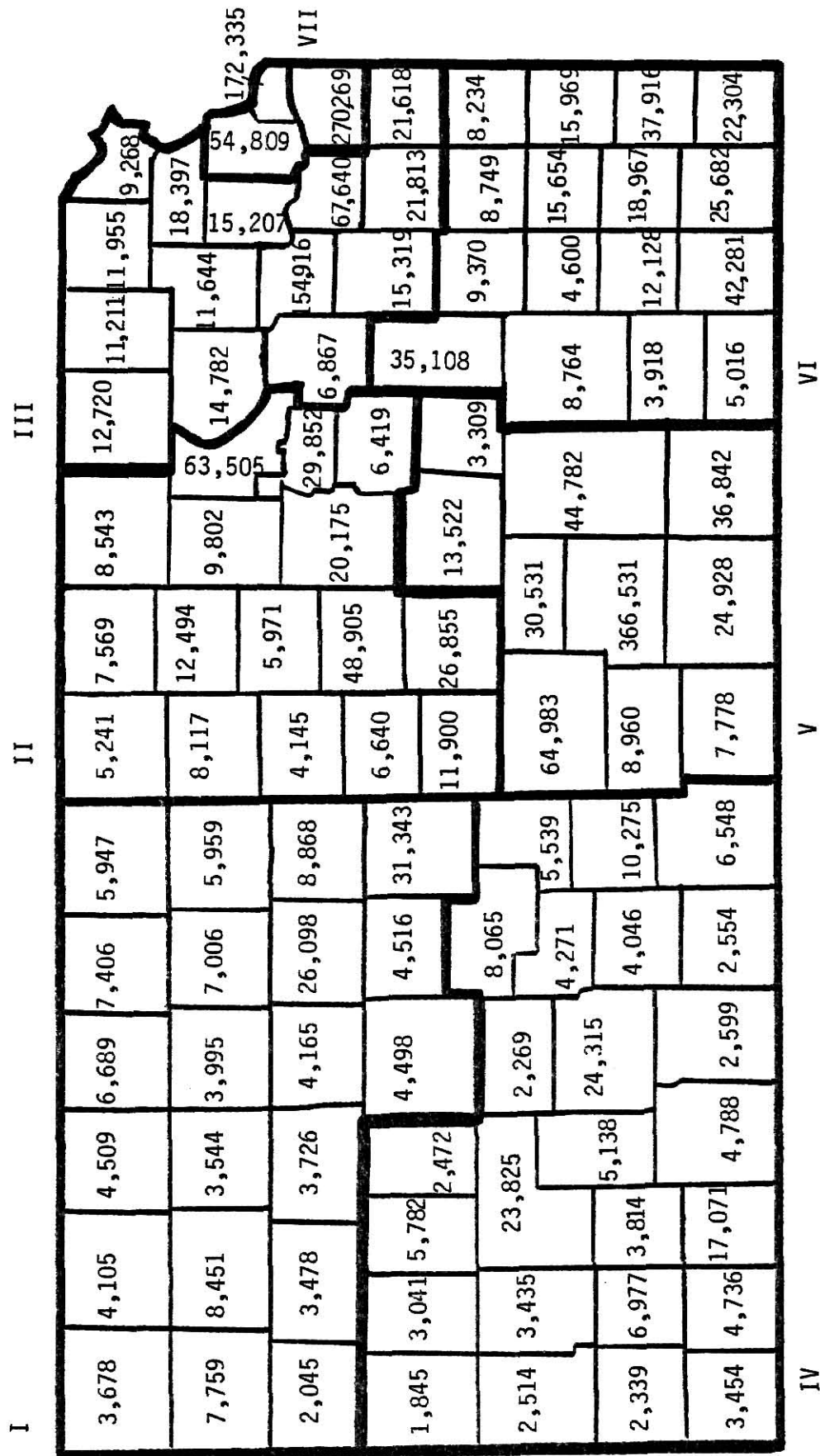


FIG. 2. Population of counties in Kansas

health care facilities in Kansas to provide a general picture of the demand for dietetic personnel needed to serve these facilities and the Kansas population.

The total number of hospitals in Kansas and greater Kansas City area as of 1981 was 182. Of these, 90 are accredited by JCAH. In Figure 3, the distribution of hospitals by county is shown. The Metropolitan (District VII) and Southwest (District IV) Districts each have 30 hospitals. The South Central (District V) and Northwest (District I) Districts have 26 and 25, respectively, 24 hospitals are located in both the North Central (District II) and Northeast (District III) Districts, and 23 in the Southeast District (District VI).

Although the hospitals are distributed fairly evenly between the seven health districts, nine counties are without hospital facilities (Fig. 3). The Northeast District (District III) has three counties without a hospital; also, three counties do not have hospitals in the Southeast District (District VI). One county in each of the other three districts [South Central (District V), Northwest (District I), and Southwest (District IV)] are without hospital facilities. With the exception of Osage county in the Northwest District (District I), the counties without hospitals are those with the lowest population in the health district (Fig. 2).

The distribution of hospital beds by county and district is shown in Figure 4. The ratio of hospital beds to population for each health district in Kansas are shown in Figure 5. The area with the most favorable population per hospital bed is the Metropolitan District (District VII) (1 bed/62 people). The North Central (District II) (1:158), Southeast (District VI) (1:138), and the South Central (District V) (1:132) Districts have the least favorable ratios.



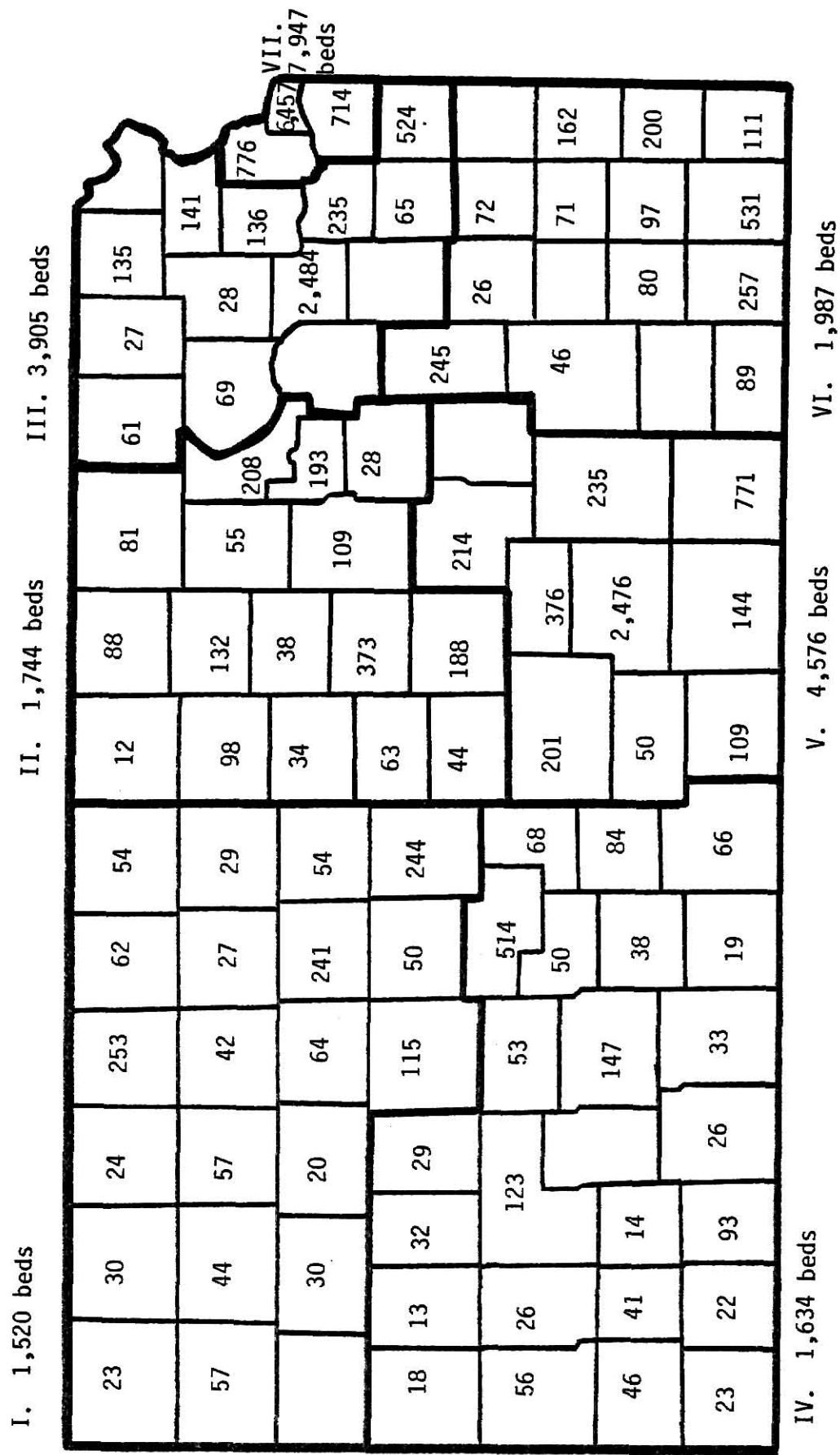
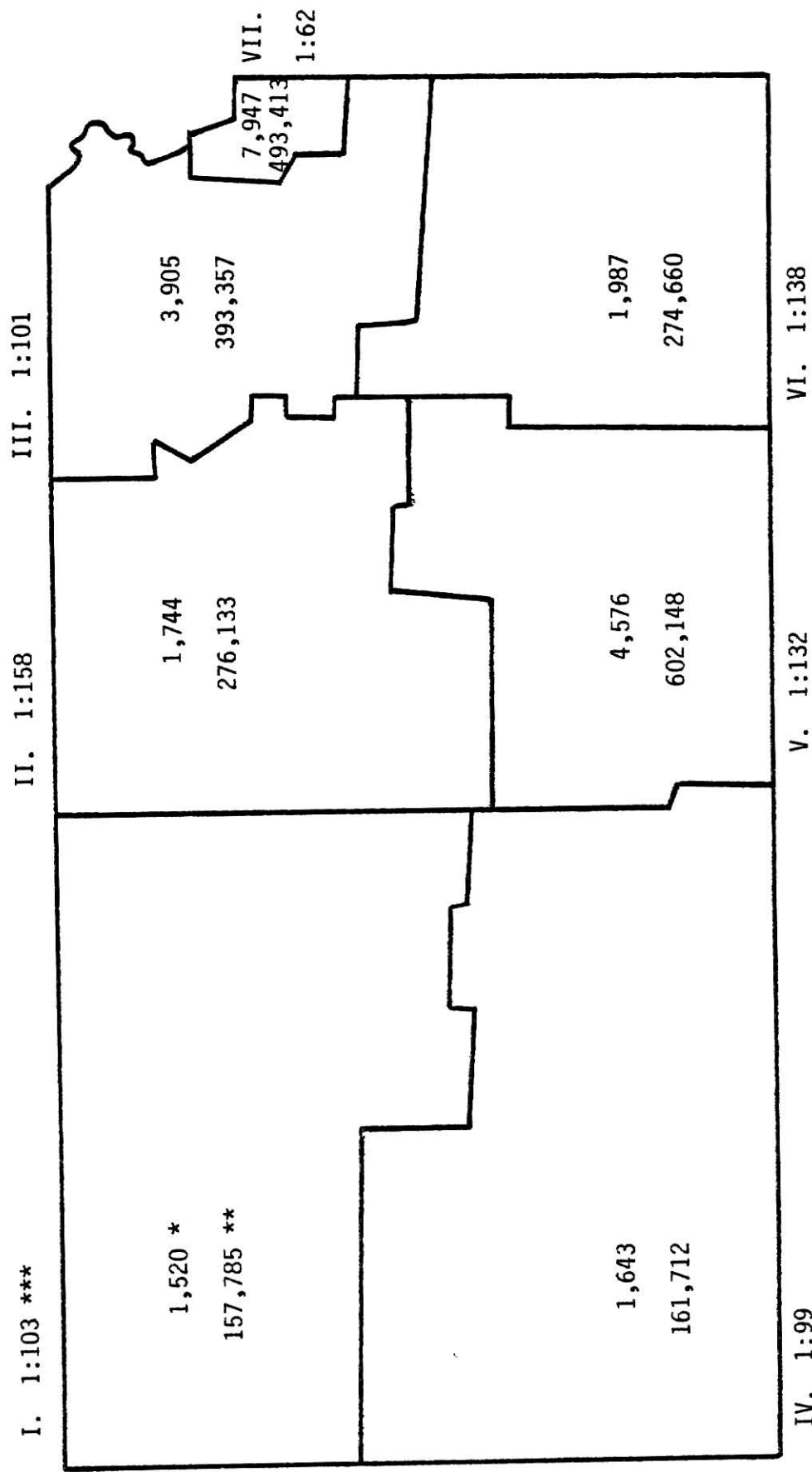


FIG. 4. Hospital beds in Kansas by county and district





\* No. of beds.      \*\* Population of district.      \*\*\* Ratio of beds to population.

FIG. 5. Ratio of number of hospital beds to population by health district

The overall ratio of hospital beds to population in the United States was 1:111 in 1963, 1:136 in 1973, and 1:159 in 1977 (78-80). Since 1963, the number of hospital beds in the United States failed to keep pace with the increase in population (81). In 1981, the number of hospital beds per capita in Kansas was 1:113, similar to the figure given for the United States' overall ratio of hospital beds per population in 1963. Perhaps this is appropriate, however, because of the greater ratio of elderly in Kansas than in the U.S. in general. Statistics indicate the elderly, as a group, utilize health care facilities more frequently than do younger age groups (82).

The total number of nursing homes in Kansas increased from 358 in 1977 to 366 in 1981 and from 24,533 beds in 1977 to 26,212 beds in 1981. The total number of nursing homes in Kansas, plus those in Kansas City, Missouri, was 414 (Fig. 6). The districts with the highest number of homes are the Metropolitan District (District VII) with 78 homes and the South Central (District V) and Northeast (District III) Districts each of which have 72 homes. As shown in Figure 6, nine Kansas counties are without nursing homes. All except one are in sparsely populated counties in the Northwest and Southwest Districts. Jewell County in the North Central District (District II), also a county with a small population, was the other county without a facility.

The total number of nursing home beds in Kansas and the greater Kansas City area was 27,492. As shown in Figure 7, the South Central (District V) and Metropolitan (District VII) Districts have the largest number of beds, 5,058 and 5,807 respectively. These districts have the largest number of beds and also, the largest populations. As shown in

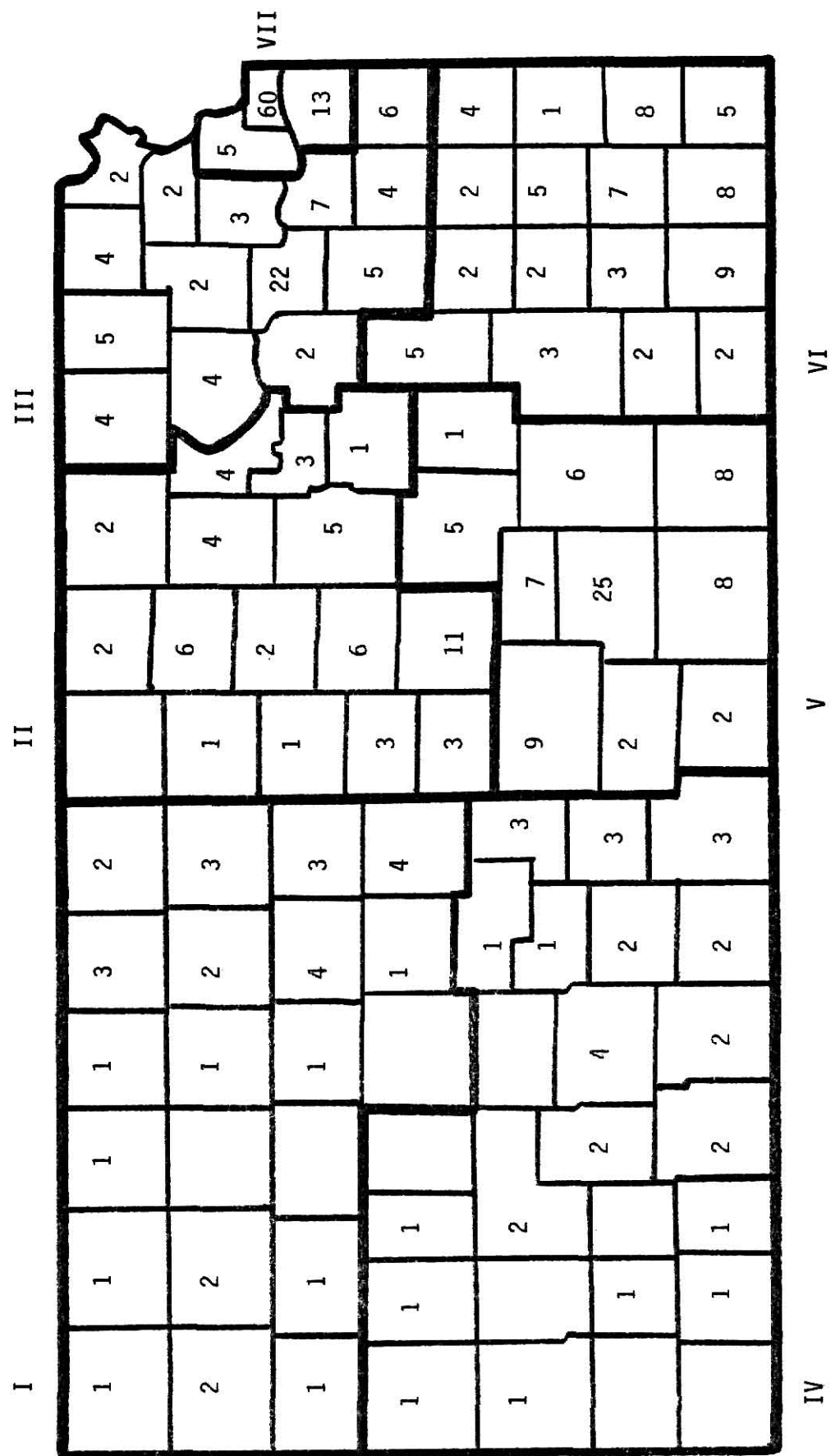




Figure 8, the ratio of nursing home beds to population varied from 1:62 to 1:102, with the most limited availability in the South Central District (District V).

### Survey of Health Care Facilities

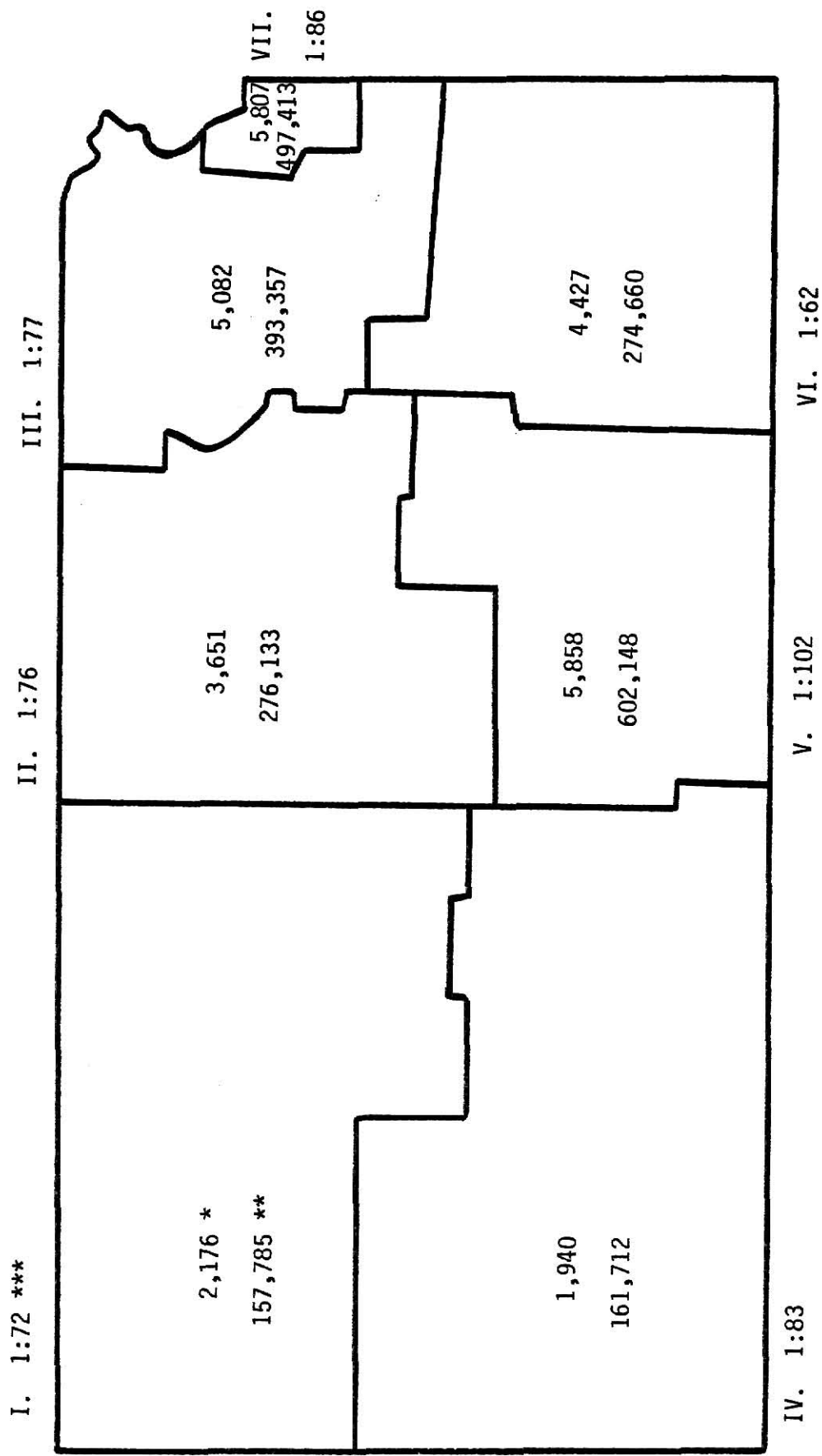
The results of the information obtained from the survey instrument are included in this section. Complete information was not provided on all questionnaires; therefore N will vary because of incomplete responses on some items.

#### Characteristics of Health Care Facilities

Descriptive data about the health care facilities are shown in Tables 1 and 2. As shown in Table 1 over half (53.8 percent) of the hospitals are nongovernment, not-for-profit and 39.1 percent are government, non-federal, and most (87.2 percent) are general medical-surgical hospitals.

Information on the length of stay classification shows that about three-fourths of the hospitals are short-term. Approximately 40 percent of the hospitals surveyed reported utilization rates of less than 50 percent; of these, about 10 percent reported occupancy rates below 25 percent. In the industry, an occupancy rate of 75 to 85 percent is necessary for a hospital to operate economically (81). Less than one-fourth of the Kansas hospitals had occupancy rates in this range at the time of the survey.

As shown in Table 2, most of the nursing homes reporting are intermediate care homes. Intermediate care facilities are staffed to provide licensed nursing personnel at least eight hours a day for five days a week and are equipped primarily for the accommodation of individuals not acutely in need of hospital care or skilled nursing care but who do



\* No. of beds.      \*\* Population of district.      \*\*\* Ratio of beds to population.

FIG. 8. Ratio of number of nursing home beds to population by health district

Table 1: Characteristics of Kansas<sup>1</sup> hospitals (N = 156)

characteristic	N <sup>2</sup>	%
type		
government, nonfederal	61	39.1
government, federal	4	2.6
nongovernment, not-for-profit	84	53.8
investor owned	5	3.2
osteopathic	2	1.3
class		
general medical and surgical	136	87.2
psychiatric	5	3.2
other	15	9.6
length		
short-term	118	75.6
long-term	10	6.4
both long- and short-term	28	17.9
number of short-term beds		
less than 25	28	19.2
25 to 49	44	30.1
50 to 74	21	14.4
75 to 99	10	6.8
100 to 199	19	13.0
200 or more	24	16.4
number of long-term beds		
less than 25	13	25.5
25 to 49	18	35.3
50 to 74	2	3.9
75 to 99	1	2.0
100 to 199	6	11.8
200 or more	11	21.6

<sup>1</sup>Data include 10 Missouri hospitals in the Greater Kansas City area.<sup>2</sup>Total N on various items may not total 156 because of nonresponses.

Table 1: (cont.)

characteristic	N	%
number of bassinets		
less than 25	102	90.3
25 to 49	8	7.0
50 to 74	2	1.8
75 to 99	1	0.9
number of total beds		
less than 25	8	4.5
25 to 49	40	25.6
50 to 74	34	21.8
75 to 99	10	6.4
100 to 199	32	20.5
200 or more	33	21.2
average daily census		
less than 25	47	34.3
25 to 49	30	21.9
50 to 74	12	8.8
75 to 99	7	5.1
100 to 199	15	10.9
200 or more	26	19.0
% occupancy		
less than 25%	13	9.5
25 to 49%	42	30.6
50 to 74%	50	36.5
74 to 100%	32	23.4



Table 2: Characteristics of Kansas<sup>1</sup> nursing homes (N = 283)

characteristic	N <sup>2</sup>	%
type of facility		
skilled	25	8.8
intermediate	246	86.9
skilled and intermediate	2	0.7
personal, skilled and intermediate	3	1.1
mental retardation center	7	2.5
number of beds in the facility		
less than 25	2	0.7
25 to 49	48	17.0
50 to 74	134	47.5
75 to 99	29	10.3
100 to 199	63	22.3
200 or more	6	2.1
average daily census		
less than 25	3	1.1
25 to 49	82	29.5
50 to 74	103	37.1
75 to 99	49	17.6
100 to 199	35	12.6
200 or more	6	2.2
% occupancy		
less than 50%	1	0.4
50 to 59%	4	1.4
60 to 69%	3	1.1
70 to 79%	14	5.1
80 to 89%	20	7.2
over 90%	235	84.8

<sup>1</sup>Data include 12 Missouri nursing homes in the Greater Kansas City area.

<sup>2</sup>Total N on various items may not total 283 because of nonresponses.

require supervised nursing care (70). A large proportion of nursing homes are intermediate care because patients requiring less than skilled nursing care can be moved to a less expensive facility and remain under Medicare (81).

Approximately half of the homes have 50 to 74 beds, about 18 percent are smaller, and the remainder are 75 beds or larger. Almost 85 percent of the nursing homes reported over 90 percent occupancy. This high occupancy rate coupled with the large number of nursing homes in Kansas documents the need for allied health practitioners, including dietitians, in this area of the health care field.

#### Dietetic Staffing

Number and Type of Positions. The type and number of full- and part-time dietetic positions in hospitals are shown in Table 3. About half of the dietitians work full-time in the clinical area. Eighteen percent work in the administration area, 13 percent are employed as generalists, and about 12 percent work in foodservice management. The largest percentage of part-time dietitians work in the clinical area and the next largest percentage work as generalists, functioning in both clinical dietetics and foodservice management.

About two-thirds of the full-time dietetic technicians employed are in nutrition care, 17.9 percent in the foodservice management area, and 15.4 percent are in general positions and perform in both areas. A total of 325 full- or part-time dietetic assistants are reportedly employed in hospitals.

Table 4 presents information about the number of full- and part-time dietetic positions in Kansas nursing homes. Only 5 percent of the facilities surveyed employed a dietitian full- or part-time; data on consultant

Table 3: Number of full- and part-time dietetic practitioners employed in Kansas hospitals

position	full-time	part-time
dietitian		
clinical	114	12
administration	42	4
foodservice management	27	2
general	30	11
research	-	-
outpatient services	6	3
teaching/training	1	-
research, teaching, and/or clinical	9	7
research, teaching, or administration	2	1
other	2	3
dietetic technician		
nutrition care	82	5
foodservice management	22	1
general	19	6
dietetic assistant/foodservice supervisor	291	34

Table 4: Number of full- and part-time dietetic practitioners employed in Kansas nursing homes

position	full-time	part-time
dietitian, excluding consultant	11	-
dietetic assistant/foodservice supervisor	285	43
dietetic technician		
nutrition care	32	21
foodservice management	32	4
general	33	36

dietitians are reported later in this section. A total of 328 dietetic assistant/foodservice supervisors are employed full- or part-time in nursing homes. A total of 97 full-time dietetic technician positions were reported, equally divided among nutrition care, foodservice management, and general. For part-time dietetic technician positions, 21 are in nutrition care, 36 in general, and only 4 in foodservice management.

The full-time position titles of the foodservice director in Kansas hospitals and nursing homes are shown in Table 5. In hospitals about 40 percent are dietitians and another 40 percent are not qualified dietitians. Only a few nursing homes reported that the director was a dietitian. About 40 percent were called foodservice directors and about half were dietetic assistant/foodservice supervisors. These data are of interest because the federal regulations for health care facilities require a trained supervisor.

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Table 5: Position title of director of foodservice in Kansas hospitals and nursing homes

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position title	hospitals	nursing homes
	%	%
dietitian	42.2	8.0
foodservice director <sup>1</sup>	41.6	42.0
dietetic technician	2.6	0.4
dietetic assistant/foodservice supervisor	13.0	47.5
other	0.6	2.2

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<sup>1</sup>Other than dietitian.

Only 20 percent of the hospital technicians and 8.2 percent of those in nursing homes had completed an associate degree. As shown in Table 6, the most frequent type of training for hospital dietetic assistants was on-the-job followed by completion of a correspondence course. About 50 percent of the nursing home foodservice supervisors had completed a correspondence course. About 50 percent of the nursing home foodservice supervisors had completed a correspondence course and one-third a vocational-technical program.

Table 6: Type of training of dietetic assistant/foodservice supervisor employed in Kansas hospitals and nursing homes

type of training	hospitals	nursing homes
	%	%
correspondence	25.3	50.5
university degree	4.2	1.5
vocational-technical school	19.9	33.4
one year college course	9.3	3.1
on-the-job training	36.2	7.7
workshops	2.0	1.2
other	3.2	2.5

Salaries. Table 7 shows the starting annual salary for dietetic personnel in Kansas hospitals and nursing homes. The range of starting annual salary reported for hospital dietitians was \$13,800 to \$20,000 and the mean was \$16,383 at the time of the survey. In nursing homes, the range for dietitians was \$14,400 to \$18,000 and the mean \$16,052.

Table 7: Current annual starting salary for dietetic personnel in Kansas hospitals and nursing homes

	hospitals		nursing homes	
	mean	range	mean	range
←———— annual salary (\$) —————→				
dietitian, excluding consultant	16,383	13,800-20,000	16,052	14,400-18,000
dietetic technician	9,875	7,280-13,415	9,068	7,175-13,015
dietetic assistant/ foodservice supervisor	10,836	7,155-15,995	9,380	6,970-15,600

The ADA recommended entry-level salary for dietitians was \$17,000 in 1981 (83). The salary level reported by most of the hospitals (68.5 percent) and nursing homes (83.3 percent) was lower than the ADA recommended salary deemed essential for recruitment and maintenance of high standards in the profession.

The ADA recommended minimum annual salary for dietetic technicians who had completed an associate degree program was \$14,500 (63). The mean annual starting salary reported for dietetic technicians was considerably lower than this recommendation, \$9,875 and \$9,068 respectively for hospitals and nursing homes.

According to the Hospital, Institution, and Educational Food Service Society (HIEFSS) (84), the salary level for dietetic technicians should be consistent with that of dietetic assistants. Although the mean salary level for the dietetic assistant in both hospitals (\$10,836) and nursing homes (\$9,830) was slightly higher than that reported for dietetic technicians, the mean annual salary level for dietetic assistants was

still considerably lower than the minimum amount recommended by ADA for a technician (63). Many of the employees classified by the administrators in the study as dietetic technicians did not meet the educational requirements specified by ADA for the positions; perhaps this explains why the salary level reported by most of the hospital and nursing home administrators for these positions was lower than that recommended by ADA. A possible explanation for the slightly higher salary level reported for dietetic assistants as compared to dietetic technicians could be that many of the dietetic assistants hold the title of foodservice director and are in charge of the foodservice department.

Dietetic Consultants. Table 8 gives general information pertaining to the employment of consultant dietitians in Kansas health care institutions. Generally, small hospitals and nursing homes are served by a consultant or part-time dietitian. Because many of the hospitals in Kansas are small, the fact that more than 40 percent of the hospitals and 95 percent of the nursing homes employed a consultant was not surprising. No budgeted vacant positions for consultant dietitians were reported by the administrators surveyed.

The amount of time the consultant spent at the facility and time spent away from the facility were also examined. One, two, or three trips per month to the facility was the most common practice. The mean number of visits per month was 2.1 for hospitals and 1.7 for nursing homes. The average time spent at hospitals on a monthly basis was higher (14.1 hours) than the average time spent at nursing homes (7.4 hours). Almost 50 percent of the nursing home consultants as compared to 22 percent of those for hospitals spent time away from the facility on work related activities,

Table 8: Data on dietetic consultation in Kansas hospitals and nursing homes

variable <sup>2</sup>	hospitals		nursing homes	
	mean	%	mean	%
employment				
number of facilities which employ a consultant		45.5		95.0
number of facilities seeking a consultant		--		--
hours per month at the facility				
less than 5		8.8		39.2
5-8		44.1		46.8
9-12		5.9		4.5
13-20		22.1		7.2
over 20		19.1		2.3
mean hrs./month	14.1		7.4	
number of visitations to facility per month				
once		47.8		61.5
2-3		29.6		26.4
4-8		22.5		11.7
9 or more		--		0.4
mean visits/month	2.1		1.7	
hours per month spent away from facility on related activities				
none		89.7		61.5
1-4		8.8		28.6
5-8		1.5		7.5
9 or more		--		2.3
mean hrs./month	2.5		4.0	
hourly pay rate				
\$8-10		27.0		15.3
\$11-15		39.7		33.5
\$16-20		19.0		23.6
over \$20		14.3		27.7
mean hourly rate	\$15.17		\$17.42	

<sup>1</sup>N = 156 hospitals and 283 nursing homes.

<sup>2</sup>All data, except the first variable, is based on number of hospitals or nursing homes with a consultant.



however, the mean hours per month at nursing homes was 4.0 and 2.5 for hospitals.

Information on hourly fees of consultant dietitians also was requested. The average hourly pay rate was slightly higher for nursing home consultants (\$17.42) than for hospital consultants (\$15.17).

Budgeted Vacant Positions. Information on the number of unfilled full- and part-time positions in the health care facilities is shown in Table 9. The hospital administrators reported nine full-time and three part-time budgeted vacant positions for dietitians, whereas the nursing homes did not report any open positions at the time of the study. Two full-time and one part-time dietetic technician positions were open at hospitals and a total of three full- or part-time positions were open at nursing homes. The largest number of unfilled full-time positions in both hospitals and nursing homes was for dietetic assistant/foodservice supervisors. Hospitals reported 25 full- or part-time unfilled positions and nursing homes reported that 58 were open.

Table 9: Number of unfilled dietetic positions in Kansas hospitals and nursing homes

	hospitals		nursing homes	
	full-time	part-time	full-time	part-time
dietitians, excluding consultants	9	3	-	-
dietetic technician	2	1	1	2
dietetic assistant/ foodservice supervisor	22	3	56	2

As shown in Table 10, six of the available positions for dietitians were in the South Central and Metropolitan districts. Positions were available for dietetic assistant/foodservice supervisors in all seven health districts.

Table 10: Number of unfilled full- and part-time positions in Kansas hospitals by health district

health district	dietitian, excluding consultant		dietetic technician		dietetic assistant/ foodservice supervisor	
	full	part	full	part	full	part
I. Northwest	-	1	-	-	3	1
II. North Central	-	1	-	1	3	1
III. Northeast	1	-	-	-	1	-
IV. Southwest	1	-	-	-	5	-
V. South Central	3	-	-	-	3	1
VI. Southeast	1	1	1	-	3	-
VII. Metropolitan	3	-	1	-	4	-

Table 11 shows the number of unfilled full- and part-time positions in Kansas nursing homes by health district. Because the majority of nursing homes employ a consultant on a part-time basis, the finding that no unfilled positions were reported for a full- or part-time dietitian was not surprising. Only the Southeast district reported having a full-time dietetic technician position open; two other part-time positions were open. The vacancies for dietetic assistant/foodservice supervisors were primarily in the South Central, Southeast, and Northeast districts.

Table 11: Number of unfilled full- and part-time positions in Kansas nursing homes by health district

health district	dietitian, excluding consultant		dietetic technician		dietetic assistant/ foodservice supervisor	
	full	part	full	part	full	part
I. Northwest	-	-	-	1	5	1
II. North Central	-	-	1	-	6	-
III. Northeast	-	-	-	-	11	-
IV. Southwest	-	-	-	-	4	-
V. South Central	-	-	-	1	14	1
VI. Southeast	-	-	-	-	12	-
VII. Metropolitan	-	-	-	-	4	-

Projections on Changes in Dietetic Positions. In Tables 12 and 13, the hospital and nursing home administrators' projections on changes for dietetic positions over the next five years are shown. In general, the administrators surveyed predicted that the number of positions would stay the same in all categories of employment. Some notable increases were projected in hospitals for dietitians, dietetic technicians, and dietetic assistant/foodservice supervisors. The most frequent reason cited by hospital administrators as the basis for these increases was improvement and expansion of services over the next five years.

#### Ratings of Dietetic Services

As shown in Table 14, about 80 percent of the hospital administrators rated their dietetic department as above average or outstanding. Data in

Table 12: Projections of Kansas hospital administrators on changes in dietetic positions over the next five years

position	increase	decrease	stay the same
	%	%	%
dietitian	17.1	1.6	81.3
consultant dietitian	2.1	6.3	91.7
dietetic technician	24.2	2.1	73.7
dietetic assistant/ foodservice supervisor	18.9	2.3	78.8

Table 13: Projections of Kansas nursing home administrators on changes in nursing home dietetic positions over the next five years

position	increase	decrease	stay the same
	%	%	%
dietitian	2.6	2.6	94.7
consultant dietitian	2.2	6.0	91.8
dietetic technician	2.4	3.2	94.4
dietetic assistant/ foodservice supervisor	8.9	1.2	89.9

Table 14: Administrators' ratings of hospital dietetic department

rating	N	%
below average	2	1.4
average	29	19.9
above average	90	61.6
outstanding	25	17.1

Table 15 indicate that about three-fourths of the nursing home administrators rated their foodservice departments accordingly. These findings were interesting in view of the negative comments often heard on meals in health care facilities.

Table 15: Administrators' ratings of nursing home foodservice department

rating	N	%
below average	-	-
average	61	22.6
above average	150	55.6
outstanding	59	21.8

In Table 16 the hospital administrators' ratings of problem areas in foodservice are enumerated. Few of the areas examined were identified as major problems. The problems listed most frequently, when analyzing the combined ratings of "major problem" and "somewhat a problem," were adequacy of facilities, patient menus, nutritional assessment and counseling,

Table 16: Administrators' ratings of problem areas in hospital food-service

problem area	major problem <sup>1</sup>	somewhat a problem	not really a problem
	%	%	%
facilities--adequate storage, equipment	13.6	25.0	61.4
food purchasing--cost, time, specifications	8.7	19.6	71.7
nutritional assessment and counseling for patients	5.7	33.3	61.0
communication between departments and/or with administrator	3.6	19.4	77.0
involvement with health care team	3.6	29.0	67.4
personnel training	3.6	33.6	62.9
quality of food in employee dining room	3.0	13.4	83.6
communication with medical staff	2.9	32.8	64.2
personnel attitudes	2.9	36.4	60.7
quality of patient food	2.2	10.8	87.0
patient menus--variety, combinations	2.1	34.8	63.1
sanitation and safety	1.4	10.1	88.5
modified diets--accuracy	1.4	24.3	74.3

<sup>1</sup>Rank ordered from those rated most to least frequently as major problem areas.

involvement in health care team, communication with medical staff, and personnel attitudes and training.

In Table 17, data are presented on the nursing home administrators' ratings of problem areas in foodservice. In analyzing those considered to be major problems and those viewed as presenting "somewhat of a problem," the following emerged most frequently: lack of trained personnel, personnel attitudes, cost of department operations, and adequacy of facilities.

In 1978, Spear et al. (77) studied the role of the consultant dietitian in nursing homes as perceived by dietitians and administrators. To study the problem areas they asked consultants and administrators to rate a list of possible problem areas similar to the problem areas investigated in this study. The administrators in the Spear study listed the following most frequently as major problem areas in foodservice: personnel selection, training, and attitudes, adequacy of facilities and equipment, cost of department operation. Findings from this study in Kansas nursing homes concurred with those in the earlier study conducted by Spears in the north central region of the United States.

Also, they found that, overall, the consultants had a greater degree of concern in all of the areas evaluated than did the administrators, with the exception of the cost of departmental operations. For example, the consultants were more concerned than the administrators about the accuracy of modified diets served in the nursing homes.

The nursing home administrators also were asked to rate the importance of consultant dietitian's activities (Table 18). Almost 80 percent rated in-service training for foodservice employees as very important and about 70 percent rated "writes modified diets" as very important. Between 50 and 70 percent considered menu planning, adjusting modified diets, and

Table 17: Administrators' ratings of problem areas in nursing home food-service

problem area	major problem <sup>1</sup>	somewhat a problem	not really a problem
	%	%	%
facilities--adequate storage, equipment	8.8	33.9	57.4
food purchasing--cost, time, specifications	7.1	26.8	66.1
cost of department operation	6.3	37.3	56.3
lack of trained personnel	6.0	34.1	59.9
personnel attitudes	5.6	40.3	54.1
menu--variety, combinations	2.8	29.1	68.1
nutritional assessment and counseling for patients	2.4	26.3	71.3
communication between departments and/or with administrator	2.0	22.8	75.2
modified diets--accuracy	1.6	37.7	60.7
quality of food	0.8	4.8	94.4
quantity food production techniques	0.8	17.6	81.6
sanitation and safety	0.4	24.8	74.8

<sup>1</sup>Rank ordered from those rated most to least frequently as major problem areas.



Table 18: Nursing home administrators' ratings of importance of consultant dietitians' activities

activity	very important <sup>1</sup>	somewhat important	not really important
	%	%	%
menu planning			
plans and writes menus	66.7	16.1	17.3
makes menu changes	35.9	36.7	27.4
modified diets			
writes modified diets	70.5	17.9	11.6
adjusts modified diets	58.7	31.9	9.4
assesses nutritional status of residents	52.6	30.4	17.0
confers with residents regarding diet	41.3	35.0	23.6
visits residents	40.2	33.9	25.9
discusses diet with physician	28.9	31.7	39.4
food purchasing			
writes specifications	16.5	25.2	58.3
determines items and amounts to purchase	12.2	8.4	79.4
places orders	8.9	2.6	88.5
confers with salesmen	7.3	4.7	88.0
food preparation			
standardizes recipes	38.2	31.7	30.1
tests menu items for taste and appearance	25.8	34.7	39.5
determines amounts to prepare	25.8	25.0	49.2
food service			
checks portion control	34.7	37.8	27.5
checks plate waste	28.3	32.0	39.7
supervises service and distribution of meals	25.0	27.4	47.6

<sup>1</sup>Percentages indicating "very important" are ordered within each category from highest to lowest.

Table 18: (cont.)

activity	very important	somewhat important	not really important
	%	%	%
organization and management			
develops department policies and procedures	44.5	27.9	27.5
communicates with other depart- ments	39.7	33.3	26.9
prepares job descriptions	33.6	25.4	41.0
conducts exit interviews with department personnel	20.5	20.5	59.0
sanitation			
establishes sanitation standards	48.2	30.4	21.5
checks refrigerator temperatures	32.7	23.3	44.1
checks dishwashing temperatures	31.6	24.2	44.3
establishes cleaning schedules and procedures	29.3	27.7	43.0
education and training			
conducts in-service training for foodservice employees	79.8	14.7	5.4
conducts in-service for other employees	43.4	30.3	26.3
orients new employees	13.0	16.7	70.3

assessing residents' nutritional status as being very important. The activities perceived as less important, which were similar to findings in the Spear study (77), were in the areas of food purchasing, food preparation, food service, organization and management, and sanitation. Likewise, Spear et al. found that the largest percentage of administrators rated in-service training and writing of modified diets as very important.

In addition, most of the administrators in that study listed the following activities of consultants as being very important: "makes menu changes," "visits residents," "confers with residents regarding diet," "discusses diets with physicians," "develops department policies and procedures," "prepares job descriptions," "communicates with other departments," "establishes sanitation standards" and "conducts in-service training for other employees." All of these activities were considered as very or somewhat important by the administrators in this study.

## SUMMARY AND CONCLUSIONS

Health personnel planning has been defined as the process whereby health personnel development is determined in a systematic fashion, to ensure that current and future health personnel resources are adequate to meet the requirements for delivery of health services to a population. The American Dietetic Association has recognized that changing times require it to pay closer attention to the issues of demand for services and consequent personnel requirements. Periodically since 1962, ADA has conducted human resource studies to determine how priorities could be established in the midst of increasing demands for all types of dietitians so that future time, efforts, and money would continue to be invested wisely.

In 1979, Cohen surveyed professional dietetic personnel in Kansas to assess the availability of consultant services for small hospitals and nursing homes. Because of the constantly changing status, she recommended that periodic studies be conducted to update the data on Kansas dietitians. Also, surveys of institutions in the state to determine vacancies and projected needs for dietetic personnel were recommended. The objective of this study was to examine the current and projected supply of and demand for dietetic personnel in nursing homes and hospitals in the state of Kansas and Greater Kansas City.

The population for the study consisted of all licensed hospitals and nursing homes in Kansas and the Greater Kansas City area in Missouri as of Fall 1981. The total return from the initial and follow-up mailings was

156 (84 percent) from hospital and 283 (68 percent) from nursing home administrators.

The instruments were developed through two drafts, involving review by the Career Laddering staff at the University of Kansas, a pretest group, and research committee members. The hospital questionnaire consisted of questions pertaining to the type of facility, dietetic staffing, and administrators' ratings of foodservice department and major problem areas. The questions in the nursing home research instrument provided information similar to that obtained in the hospital questionnaire. In addition, the nursing home administrators were asked to rate the importance of the consultant dietitian's activity, if a consultant was employed at the facility.

The first part of the results section included information pertaining to general statistical data on Kansas hospitals and nursing homes. In the second section the results obtained from the survey of hospitals and nursing homes were discussed.

The total number of hospitals in Kansas and greater Kansas City area as of 1981 was 182. Although the hospitals were distributed fairly evenly between the seven health districts, nine counties were without hospital facilities. The area with the most favorable population per hospital bed was the Metropolitan District (1 bed/62 people). The North Central (1:158), Southeast (1:138), and the South Central (1:132) Districts had the least favorable ratios.

The districts with the largest number of nursing homes were the Metropolitan District with 78 homes, and the South Central and Northeast Districts each of which had 72 homes. Nine counties were without nursing

homes. All except one were in sparsely populated counties in the Northwest and Southwest Districts.

More than half of the hospitals were nongovernment, not-for-profit and most (87 percent) were general medical-surgical. Most of the nursing homes reporting were intermediate care homes.

Survey data from the research instruments provided specific information on dietetic staffing. About half of the dietitians worked full-time in the clinical area. The largest percentage (30 percent) of part-time dietitians also worked in clinical practice. About two-thirds of the full-time dietetic technicians were in nutrition care.

Information on the full-time position titles of the foodservice director in Kansas hospitals indicated that about 40 percent were dietitians. Only a few nursing homes reported that the director was a dietitian. Approximately half reported that the dietetic assistant was in charge of the foodservice department. These data were of interest because the federal regulations for health care facilities require a trained supervisor.

Only 20 percent of the hospital technicians and less than 10 percent of those in nursing homes had completed an associate degree. The most frequent type of training for hospital dietetic assistants was on-the-job followed by completion of a correspondence course. About 50 percent of the nursing home supervisors had completed a correspondence course and one-third a vocational-technical program.

The survey data also provided information on the starting annual salary for dietetic personnel in Kansas hospitals and nursing homes. The mean annual starting salary reported for hospital dietitians was \$16,383 and \$16,052 for nursing homes, while for dietetic technicians salaries

were \$9,875 and \$9,068, respectively, for hospitals and nursing homes. Although the mean salary levels for dietetic assistants in both hospitals (\$10,836) and nursing homes (\$9,830) were slightly higher than those reported for dietetic technicians.

Consultant dietitians were employed in approximately 40 percent of the hospitals and 95 percent of the nursing homes. The average time spent at hospitals on a monthly basis was higher (14.1 hours) than the average time spent at nursing homes (7.4 hours). Almost 50 percent of the nursing home consultants as compared to 22 percent of those for hospitals spent time away from the facility on work related activities; the mean hours per month at nursing homes was 4.0 and 2.5 for hospitals. The average hourly pay rate was slightly higher for nursing home consultants (\$17.42) than for hospital consultants (\$15.17).

Information on the number of unfilled full- and part-time positions in the health care facilities indicated that the largest number of vacant full-time positions in both hospitals and nursing homes was for dietetic assistants. Hospitals reported 25 full- or part-time unfilled positions and nursing homes reported 58.

The administrators predicted that the number of positions would stay the same in all categories of employment. Some notable increases were projected in hospitals for dietitians, dietetic technicians, and dietetic assistants. The most frequent reason cited by the hospital administrators as the basis for these projections was improvement and expansion of services over the next five years.

Statistics regarding the administrators' ratings of the foodservice department indicated that about 80 percent rated their dietetic department

as above average or outstanding. About three-fourths of the nursing home administrators rated their foodservice department accordingly.

Information on the administrators' ratings of problem areas in hospital foodservice indicated that adequacy of storage and equipment was considered a major problem by almost 15 percent and about 10 percent considered food purchasing a major problem. In addition to these problems, several nursing home administrators indicated that cost of department operation was a major problem area. In a 1977 study, nursing home administrators cited personnel selection, training, and attitudes as major problems.

The statistics regarding the nursing home administrators' ratings of the importance of consultant dietitian's activities indicated that most of the administrators rated conduct of in-service training for foodservice employees as very important and 70 percent rated writes modified diets. Likewise, in 1977 the administrators rated "conducts in-service training" and "writes modified diets" as very important.

The dietetic staffing data indicate that there continues to be a need for all levels of dietetic personnel with the greatest needs found in the Kansas City area Metropolitan District. Dietetic assistants and dietetic technicians should expect more growth than dietitians. These data suggest a need to expand educational opportunities, including continuing education, for both dietetic technicians and dietetic assistants in the state.



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## APPENDIXES

APPENDIX A  
Questionnaire Evaluation



(KSU Letterhead)

January 14, 1982

TO: Participants in Pilot Study

FROM: Diana Stadel  
Graduate Student

Allene G. Vaden, Ph.D., R.D.  
Major Professor

We appreciate your willingness to help in the pilot study which is part of a research project here at K-State on the status of dietetic manpower in Kansas. We want your honest reactions and criticisms to help us finalize the questionnaire.

Enclosed is the preliminary questionnaire and a form to evaluate the items. Please complete the questionnaire as though you were a respondent then list any suggestions and comments on the evaluation form. Please feel free to make any suggestions you believe will improve the study.

If you do not feel comfortable with the questionnaire, please feel free to forward it to the director of dietary services. I will pick up the completed questionnaire January 20 at your office. Thank you for your support and cooperation in the pilot study.

We appreciate your help!



APPENDIX B  
Research Instruments

STUDY OF DIETETIC PERSONNEL IN KANSAS  
Hospital Administrator's Edition

Please respond to all questions as completely as possible. We request that the questionnaire be completed by the Administrator of the hospital or Assistant Administrator with responsibility for dietetic services. If input is needed from dietetic service personnel, please feel free to consult with them.

1. Type of facility:
  - ☐ (1) Government, nonfederal
  - ☐ (2) Nongovernment, not-for-profit
  - ☐ (3) Investor-owned
  - ☐ (4) Osteopathic
2. Hospital service classification:
  - ☐ (1) General medical and surgical
  - ☐ (2) Psychiatric
  - ☐ (3) Children's general
  - ☐ (4) Other, please specify \_\_\_\_\_
3. Length of stay classification:
  - ☐ (1) Short-term; average length of stay for all patients is less than 30 days or over 50 percent of all patients are admitted to units where average length of stay is less than 30 days.
  - ☐ (2) Long-term; average length of stay for all patients is 30 days or more or over 50 percent of all patients are admitted to units where average length of stay is 30 days or more.
  - ☐ (3) Both Short- and Long-term
4. Number of beds in the facility (fill in the number in each category).
 

no. beds	
<input type="checkbox"/> (1) Short-term	
<input type="checkbox"/> (2) Long-term	
<input type="checkbox"/> (3) Bassinets	
5. Average daily census: \_\_\_\_\_
6. Who is the director of foodservice?
  - ☐ (1) Dietitian
  - ☐ (2) Foodservice director (non-dietitian)
  - ☐ (3) Dietetic technician (graduate of a 2 year associate degree program)
  - ☐ (4) Dietetic assistant/foodservice supervisor
  - ☐ (5) Other, please specify \_\_\_\_\_
- 7a. Please give the total number of full- and part-time dietitians employed (excluding consultants): \_\_\_\_\_
- b. Of this total number, please indicate the number in each of these categories:
 

no. dietitians	
<input type="checkbox"/> (1) Employed full-time (35hrs/wk or more)	
<input type="checkbox"/> (2) Employed part-time (Less than 35hrs/wk)	
- 7c. Please indicate number and type of full- and part-time dietitians employed. Fill in the number in each category. (Please record each person in only one category; add new categories if needed.)
 

No. Full-Time	No. Part-Time	
_____	_____	(1) Clinical
_____	_____	(2) Administration
_____	_____	(3) Foodservice Management
_____	_____	(4) General; positions combining Clinical and Administration
_____	_____	(5) Research
_____	_____	(6) Outpatient services
_____	_____	(7) Teaching/training
_____	_____	(8) Positions combining research, teaching, and/or Clinical
_____	_____	(9) Positions combining research, teaching, and/or Administration
_____	_____	(10) Other, please specify _____
- 8a. Do you currently employ a consultant dietitian?
  - ☐ (1) yes
  - ☐ (2) no
- b. If no, are you actively seeking a consultant?
  - ☐ (1) yes
  - ☐ (2) no
- 9a. If you employ a consultant, how many hours per month does the consultant dietitian spend at your facility?
 

	Hours per month
--	-----------------
- b. Indicate the number of times the consultant visits your facility each month:
 

	No. times/month
--	-----------------
- c. What is the hourly pay rate for the consultant?
 

	Hourly pay rate
--	-----------------
- d. Does this rate include travel time?
  - ☐ (1) yes
  - ☐ (2) no
- e. Is the consultant paid for work done at home related to your facility (e.g., planning menus)?
  - ☐ (1) yes
  - ☐ (2) no
- f. If yes to 9e, indicate average number of hours per month:
 

	Hrs./month
--	------------

(over please)

10. Please indicate number and type of dietetic technicians employed. Fill in the number in each category. If you do not employ a dietetic technician, skip to question 12.

Specialty	Full-Time (35hrs/wk or more)	Part-Time (Less than 35hrs/wk)
1. Nutrition Care		
2. Foodservice Management		
3. Technicians who perform in both areas		

11. How many of these technicians are graduates of a 2 year associate degree program approved by ADA?

\_\_\_\_\_ No. graduates

- 12a. How many dietetic assistant/foodservice supervisors do you employ? (Give the number for each category.)

\_\_\_\_\_ no. supr.

- \_\_\_\_\_ (1) Full-Time (35hrs/wk or more)  
\_\_\_\_\_ (2) Part-Time (Less than 35hrs/wk)

- b. Please indicate training for each of these supervisors:

\_\_\_\_\_ no. completing  
\_\_\_\_\_ training

- \_\_\_\_\_ (1) Correspondence course  
\_\_\_\_\_ (2) Vocational school course  
\_\_\_\_\_ (3) One year college course  
\_\_\_\_\_ (4) On-the-job (no formal training)  
\_\_\_\_\_ (5) Other, please specify \_\_\_\_\_

13. Please indicate number of positions in each of the categories listed which are currently not filled. (If all are filled, record zeros. If you do not employ persons in a category, enter N.A. for not applicable.)

Position	No. of Positions Unfilled	
	Full-Time (35hrs/wk or more)	Part-Time (Less than 35hrs/wk)
1. Dietitian, not including consultants		
2. Dietetic technician		
3. Dietetic assistant/foodservice supervisor		

14. Please indicate the current starting salary on a full time basis for the following dietetic personnel. If you do not employ persons in a category, enter N.A. for not applicable.

Position	Amount	Basis (specify hour, week, month, or annual)
1. Dietitian, not including consultants		
2. Dietetic technician		
3. Dietetic assistant/foodservice supervisor		

15. For the following jobs, please indicate whether you expect the number of positions to increase, decrease, or remain the same over the next 5 years.

Position	Increase	Decrease	Stay the same
1. Dietitians, Full- or Part-time			
2. Consultant dietitian			
3. Dietetic technician			
4. Dietetic assistant/foodservice supervisor			

If you expect a change in positions the next 5 years, please answer question 16. If not, skip to question 17.

- 16a. If you anticipate increases, please indicate why. (Check all that apply.)

- \_\_\_\_\_ (1) Expansion of services  
\_\_\_\_\_ (2) Improvement of services  
\_\_\_\_\_ (3) Addition of beds  
\_\_\_\_\_ (4) State licensing requirements  
\_\_\_\_\_ (5) State legislative appropriation of funds  
\_\_\_\_\_ (6) Other, please specify \_\_\_\_\_

- b. If you anticipate decreases, please indicate why. (Check all that apply.)

- \_\_\_\_\_ (1) Elimination of services  
\_\_\_\_\_ (2) Reduction in number of beds  
\_\_\_\_\_ (3) Reduction in State Funds  
\_\_\_\_\_ (4) Reduction in Federal Funds  
\_\_\_\_\_ (5) Change in state licensing requirements  
\_\_\_\_\_ (6) Change in federal regulations  
\_\_\_\_\_ (7) Other, please specify \_\_\_\_\_

17. Overall, how would you rate the dietetic service department at your facility?

- \_\_\_\_\_ (1) Below average  
\_\_\_\_\_ (2) Average  
\_\_\_\_\_ (3) Above average  
\_\_\_\_\_ (4) Outstanding

18. Presently what do you believe are the major problem areas in your dietetic service department? Please rate each of these possible problem areas on the following scale:

1. Not really a problem  
2. Somewhat of a problem  
3. Major problem area

- \_\_\_\_\_ (1) Patient menus--variety, combinations  
\_\_\_\_\_ (2) Modified diets--accuracy  
\_\_\_\_\_ (3) Nutrition assessment and counseling for patients  
\_\_\_\_\_ (4) Food purchasing--cost, time, specifications  
\_\_\_\_\_ (5) Facilities--adequate storage, equipment  
\_\_\_\_\_ (6) Quality of patient food  
\_\_\_\_\_ (7) Quality of food in employee dining room  
\_\_\_\_\_ (8) Sanitation and safety  
\_\_\_\_\_ (9) Personnel attitudes  
\_\_\_\_\_ (10) Personnel training  
\_\_\_\_\_ (11) Communication between departments and/or with administrator  
\_\_\_\_\_ (12) Communication with medical staff  
\_\_\_\_\_ (13) Involvement with health care team  
\_\_\_\_\_ (14) Other problem areas, please specify \_\_\_\_\_

STUDY OF DIETETIC PERSONNEL IN KANSAS  
Adult Care Home Administrator's Edition

Please respond to all questions as completely as possible. We request that the questionnaire be completed by the Administrator of the home. If input is needed from dietetic service personnel, please feel free to consult with them.

1. Average daily census: \_\_\_\_\_
2. Who is the director of foodservice?
  - \_\_\_\_\_ (1) Dietitian
  - \_\_\_\_\_ (2) Foodservice director (non-dietitian)
  - \_\_\_\_\_ (3) Dietetic technician (graduate of a 2 year associate degree program)
  - \_\_\_\_\_ (4) Dietetic assistant/foodservice supervisor
  - \_\_\_\_\_ (5) Other, please specify \_\_\_\_\_
- 3a. Please give the total number of full- and part-time dietitians employed (excluding consultants; question 4 relates to consultants): \_\_\_\_\_
- b. Of this total number, please indicate the number in each of these categories:
  - no. dietitians
  - \_\_\_\_\_ (1) Employed full-time (35hrs/wk or more)
  - \_\_\_\_\_ (2) Employed part-time (Less than 35hrs/wk)
- 4a. Do you currently employ a consultant dietitian?
  - \_\_\_\_\_ (1) yes
  - \_\_\_\_\_ (2) no
- b. If no, are you actively seeking a consultant?
  - \_\_\_\_\_ (1) yes
  - \_\_\_\_\_ (2) no
- 5a. If you employ a consultant, how many hours per month does the consultant dietitian spend at your facility?
  - \_\_\_\_\_ Hours per month
- b. Indicate the number of times the consultant visits your facility each month:
  - \_\_\_\_\_ No. times/month
- c. What is the hourly pay rate for the consultant?
  - \_\_\_\_\_ Hourly pay rate
- d. Does this rate include travel time?
  - \_\_\_\_\_ (1) yes
  - \_\_\_\_\_ (2) no
- e. Is the consultant paid for work done at home related to your facility (e.g., planning menus)?
  - \_\_\_\_\_ (1) yes
  - \_\_\_\_\_ (2) no
- f. If yes, to 5e, indicate average number of hours per month:
  - \_\_\_\_\_ Hrs./month

6. Please indicate number and type of dietetic technicians employed. Fill in the number in each category. If you do not employ a dietetic technician, skip to question 8.

Specialty	Full-Time (35hrs/wk or more)	Part-Time (Less than 35hrs/wk)
1. Nutrition Care		
2. Foodservice Management		
3. Technicians who perform in both areas		

7. How many of these technicians are graduates of a 2 year associate degree program approved by ADA?
  - \_\_\_\_\_ No. graduates
- 8a. How many dietetic assistant/foodservice supervisors do you employ? (Give the number for each category.)
  - no. supr.
  - \_\_\_\_\_ (1) Full-Time (35hrs/wk or more)
  - \_\_\_\_\_ (2) Part-Time (Less than 35hrs/wk)
- b. Please indicate training for each of these supervisors:
  - no. completing training
  - \_\_\_\_\_ (1) Correspondence course
  - \_\_\_\_\_ (2) Vocational school course
  - \_\_\_\_\_ (3) One year college course
  - \_\_\_\_\_ (4) On-the-job (no formal training)
  - \_\_\_\_\_ (5) Other, please specify \_\_\_\_\_
9. Please indicate number of positions in each of the categories listed which are currently not filled. (If all are filled, record zeros. If you do not employ persons in a category, enter N.A. for not applicable.)

Position	No. of Positions Unfilled	
	Full-time (35hrs/wk or more)	Part-time (Less than 35hrs/wk)
1. Dietitian, not including consultants		
2. Dietetic technician		
3. Dietetic assistant/foodservice supervisor		

(over please)

10. Please indicate the current starting salary on a full time basis for the following dietetic personnel. If you do not employ persons in a category, enter N.A. for not applicable.

Position	Amount	Basis (specify hour, week, month, or annual)
1. Dietitian, not including consultants		
2. Dietetic technician		
3. Dietetic assistant/foodservice supervisor		

11. For the following jobs, please indicate whether you expect the number of positions to increase, decrease, or remain the same over the next 5 years.

Position	Increase	Decrease	Stay the same
1. Dietitians, full- or part-time			
2. Consultant dietitian			
3. Dietetic technician			
4. Dietetic assistant/foodservice supervisor			

If you expect a change in positions the next 5 years, please answer question 12, if not, skip to question 13.

- 12a. If you anticipate increases, please indicate why. (Check all that apply.)

- ☐ (1) Expansion of services  
☐ (2) Improvement of services  
☐ (3) Addition of beds  
☐ (4) State licensing requirements  
☐ (5) State legislative appropriation of funds  
☐ (6) Other, please specify \_\_\_\_\_

- b. If you anticipate decreases, please indicate why. (Check all that apply.)

- ☐ (1) Elimination of services  
☐ (2) Reduction in number of beds  
☐ (3) Reduction in State Funds  
☐ (4) Reduction in Federal Funds  
☐ (5) Change in state licensing requirements  
☐ (6) Change in federal regulations  
☐ (7) Other, please specify \_\_\_\_\_

13. Overall, how would you rate the foodservice department at your facility?

- ☐ (1) Below average  
☐ (2) Average  
☐ (3) Above average  
☐ (4) Outstanding

14. Presently what do you believe are the major problem areas in your foodservice department? Please rate each of these possible problem areas on the following scale:

1. Not really a problem  
 2. Somewhat of a problem  
 3. Major problem area

- ☐ (1) Menu--variety, combinations  
☐ (2) Modified diets--accuracy  
☐ (3) Nutritional assessment and counseling for patients  
☐ (4) Food purchasing--cost, time, specifications  
☐ (5) Facilities--adequate storage, equipment  
☐ (6) Quality of food  
☐ (7) Quantity food production techniques  
☐ (8) Sanitation and safety  
☐ (9) Lack of trained personnel  
☐ (10) Personnel attitudes  
☐ (11) Cost of department operation  
☐ (12) Communication between departments and/or with administrator  
☐ (13) Other problem areas, please specify \_\_\_\_\_

15. Please read the following list of responsibilities and carefully rate the importance of the consultant's activity on the following scale:

1. Not really important  
 2. Somewhat important  
 3. Very important

#### Menu Planning

- ☐ (1) Plans and writes menus  
☐ (2) Makes menu changes

#### Modified Diets

- ☐ (1) Writes modified diets  
☐ (2) Adjusts modified diets  
☐ (3) Visits residents  
☐ (4) Assesses nutritional status of residents  
☐ (5) Confers with residents regarding diet  
☐ (6) Discusses diets with physicians

#### Food Purchasing

- ☐ (1) Determines items and amounts to purchase  
☐ (2) Places orders  
☐ (3) Confers with salesmen  
☐ (4) Writes specifications

#### Food Preparation

- ☐ (1) Determines amounts to prepare  
☐ (2) Standardizes recipes  
☐ (3) Tests menu items for taste and appearance

#### Food Service

- ☐ (1) Supervises service and distribution of meals  
☐ (2) Checks portion control  
☐ (3) Checks plate waste

#### Organization and Management

- ☐ (1) Develops department policies and procedures  
☐ (2) Prepares job descriptions  
☐ (3) Conducts exit interviews with department personnel  
☐ (4) Communicates with other departments

#### Sanitation

- ☐ (1) Establishes sanitation standards  
☐ (2) Checks dishwashing temperatures  
☐ (3) Checks refrigerator temperatures  
☐ (4) Establishes cleaning schedules and procedures

#### Education and Training

- ☐ (1) Conducts in-service training for foodservice employees  
☐ (2) Conducts in-service for other employees  
☐ (3) Orients new employees

APPENDIX C  
Correspondence



(KSU Letterhead)

February 12, 1982

Dear Hospital Administrator:

The Department of Dietetics, Restaurant and Institutional Management at Kansas State University is conducting a survey of dietetic personnel in Kansas. The objective of the study is to examine the current and projected supply of dietetic personnel in the state. This personnel data base will aid in (a) assessing the demand on educational institutions that provide training or educational programs and (b) identifying regions within the state that are understaffed and the location of personnel to meet these dietetic needs. We are requesting data from all hospitals and all nursing homes in Kansas.

You may have provided data in 1980 to the Career Laddering Task Force which worked in cooperation with the University of Kansas Medical Center. Our study is designed to update that survey. We have worked with the KU staff in designing this study.

Your cooperation in completing the enclosed form is vital in order for us to compile accurate, reliable statistics. We would appreciate your responses to all items on the questionnaire.

We request that the questionnaire be completed by the Administrator of the hospital or Assistant Administrator with responsibility for dietetic services. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire, please place it in the enclosed stamped envelope and drop it in the mail. This should take only about 10 minutes of your time--will you please return it to us by the end of the week?

We need your help to make this survey a valuable source of information about dietetic manpower issues in Kansas. Thank you for your assistance, and we look forward to receiving your comments and the completed questionnaires.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

(KSU Letterhead)

February 12, 1982

Dear Nursing Home Administrator:

The Department of Dietetics, Restaurant and Institutional Management at Kansas State University is conducting a survey of dietetic personnel in Kansas. The objective of the study is to examine the current and projected supply of dietetic personnel in the state. This personnel data base will aid in (a) assessing the demand on educational institutions that provide training or educational programs and (b) identifying regions within the state that are understaffed and the location of personnel to meet these dietetic needs. We are requesting data from all nursing homes and all hospitals in Kansas.

You may have provided data in 1980 to the Career Laddering Task Force which worked in cooperation with the University of Kansas Medical Center. Our study is designed to update that survey. We have worked with the KU staff in designing this study.

Your cooperation in completing the enclosed form is vital in order for us to compile accurate, reliable statistics. We would appreciate your responses to all items on the questionnaire.

We request that the questionnaire be completed by the Administrator of the facility. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire, please place it in the enclosed stamped envelope and drop it in the mail. This should take only about 10 minutes of your time--will you please return it to us by the end of the week?

We need your help to make this survey a valuable source of information about dietetic manpower issues in Kansas. Thank you for your assistance, and we look forward to receiving your comments and the completed questionnaires.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

## (KSU Letterhead)

March 1, 1982

Dear Kansas Hospital Administrator:

We need your help! About two weeks ago we sent you a questionnaire concerning a survey of dietetic manpower issues in Kansas. For the study to yield valid results we need input from all Kansas Administrators.

In the event you did not receive the first mailing, let me briefly restate the purpose of the study. We are conducting a survey to examine the current and projected supply and demand for dietetic personnel in Kansas. Enclosed is another copy of the questionnaire. We request that the questionnaire be completed by the Administrator of the hospital or Assistant Administrator with responsibility for dietetic services. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire please place it in the enclosed stamped envelope and drop it in the mail. The survey should only take about 10 minutes of your time--will you please return it to us by the end of the week? Thank you for your cooperation and time in answering the questionnaire.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

ns  
Enclosure

(KSU Letterhead)

March 1, 1982

Dear Kansas Nursing Home Administrator:

We need your help! About two weeks ago we sent you a questionnaire concerning a survey of dietetic manpower issues in Kansas. For the study to yield valid results we need input from all Kansas Administrators.

In the event you did not receive the first mailing, let me briefly restate the purpose of the study. We are conducting a survey to examine the current and projected supply and demand for dietetic personnel in Kansas. Enclosed is another copy of the questionnaire for your use. We request that the questionnaire be completed by the Administrator of the facility. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire please place it in the enclosed stamped envelope and drop it in the mail. The survey should only take about 10 minutes of your time--will you please return it to us by the end of the week? Thank you for your cooperation and time in answering the questionnaire.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

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Enclosure

(KSU Letterhead)

March 1, 1982

Dear Missouri Hospital Administrator:

We need your help! About two weeks ago we sent you a questionnaire concerning a survey of dietetic manpower issues in Kansas. Your hospital was included in the study because it is a potential source of employment for Kansas dietitians and dietetic technicians who may travel across the Missouri line for employment purposes. Therefore, for the study to yield valid results, we need responses from all of the Missouri Administrators surveyed.

In the event you did not receive the first mailing, let me briefly restate the purpose of the study. We are conducting a survey to examine the current and projected supply and demand for dietetic personnel in Kansas. Enclosed is another questionnaire in the event it is needed. We request that the questionnaire be completed by the Administrator of the hospital or Assistant Administrator with responsibility for dietetic services. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire, please place it in the enclosed stamped envelope and drop it in the mail. The survey should only take about 10 minutes of your time--will you please return it to us by the end of the week? Thank you for your assistance and we look forward to receiving your comments and the completed questionnaire.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

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Enclosure

(KSU Letterhead)

March 1, 1982

Dear Missouri Nursing Home Administrator:

We need your help! About two weeks ago we sent you a questionnaire concerning a survey of dietetic manpower issues in Kansas. Your facility was selected because it is a potential source of employment for Kansas dietitians and dietetic technicians who may travel across the Missouri line for employment purposes. Therefore, for the study to yield valid results, we need responses from all Greater Kansas City Administrators.

In the event you did not receive the first mailing let me briefly restate the purpose of the study. We are conducting a survey to examine the current and projected supply and demand for dietetic personnel in Kansas and Kansas City. Enclosed is another questionnaire in the event it is needed. We request that the questionnaire be completed by the Administrator of the facility. If input is needed from dietetic service personnel, please feel free to consult with them.

When you have completed the questionnaire, please place it in the enclosed stamped envelope and drop it in the mail. The survey should only take about 10 minutes of your time--will you please return it to me by the end of the week? Thank you for your assistance and we look forward to receiving your comments and the completed questionnaire.

Sincerely,

Allene G. Vaden, Ph.D., R.D.  
Professor

Diana Stadel  
Graduate Assistant

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Enclosure

STATUS AND TRENDS OF DIETETIC STAFFING IN KANSAS  
HOSPITALS AND NURSING HOMES

by

DIANA LYNN STADEL

B.S., Kansas State University, 1977

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Dietetics, Restaurant  
and Institutional Management

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1983

## ABSTRACT

The need for health personnel planning is critical because of the length of time needed to train health professionals. The American Dietetic Association has long had an interest in human resource issues. Periodically since 1962, ADA has conducted human resource studies.

In 1979, Cohen surveyed professional dietetic personnel in Kansas to assess the availability of consultant services for small hospitals and nursing homes. Because of the constantly changing status of personnel, she recommended that periodic studies be conducted to update data on Kansas dietitians. Also, surveys of institutions in the state to determine vacancies and projected needs for dietetic personnel were recommended. The objective of this study was to examine the current and projected supply of and demand for dietetic personnel in the state of Kansas.

The population for the study consisted of all licensed hospitals and nursing homes in Kansas and the Greater Kansas City area in Missouri as of fall 1981. The total return from the initial and follow-up mailings was 156 (84 percent) from hospital administrators and 283 (68 percent) from nursing home administrators.

Information was gathered pertaining to general statistical data on Kansas hospitals and nursing homes. The area with the most favorable population per hospital bed was the Metropolitan District (1 bed/62 people). The districts with the largest number of nursing homes were the Metropolitan District (Kansas City area) with 78 homes and the South Central and Northeast Districts, each of which had 72 homes.



The survey data from the research instruments provided specific information on dietetic staffing and ratings of dietetic services. About half of the dietitians worked full-time in the clinical area and about two-thirds of the full-time dietetic technicians were in nutrition care. The largest number of unfilled full-time positions in both hospitals and nursing homes was for dietetic assistants.

The administrators generally predicted that the number of positions would stay the same in the categories of employment surveyed. Some increases were projected in hospitals for dietitians, dietetic technicians, and dietetic assistants, however. The most frequent reason cited by the hospital administrators as the basis for these increases was improvement and expansion of services over the next five years.

The hospital administrators listed the following most frequently as problem areas in foodservice: patient menus, nutritional assessment and counseling, involvement in health care team, communication with medical staff, and personnel attitudes and training. The problems listed most frequently by the nursing home administrators included lack of trained personnel, personnel attitudes, cost of department operations, and adequacy of facilities. Findings from this study in Kansas nursing homes concurred with those in an earlier study conducted in the North Central Region of the United States.

The consultant's activities perceived as very important by the nursing home administrators were in the areas of menu planning, modified diets, and education and training. The activities perceived as less important were food purchasing, food preparation, and maintaining certain reports, as well as employment activities.