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RECOMMENDATIONS OF THE NATIONAL COMMISSION ON ALLIED  
HEALTH EDUCATION (NCAHE): PRIORITIES  
FOR THE DIETETIC PROFESSION

by

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B.S., University of Idaho, 1972

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A MASTER'S THESIS

submitted in partial fulfillment of the  
requirements for the degree

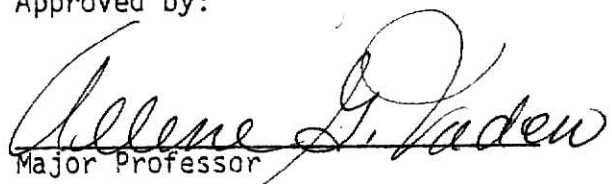
MASTER OF SCIENCE

Department of Dietetics, Restaurant and  
Institutional Management

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1981

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## ACKNOWLEDGMENTS

Appreciation is expressed to Dr. Allene Vaden for her guidance and expertise throughout the course of my research. Also, grateful acknowledgment is extended to Dr. Donald Hoyt for his technical assistance in the statistical design and analysis of the research. A note of gratitude is expressed to Dr. Marian Spears for her suggestions and contribution in the completion of this thesis.

I would like to thank the U.S. Army for giving me the opportunity to pursue my graduate degree while on active duty. Finally, to my family and friends, go my heartfelt thanks for their encouragement and support throughout the entire graduate study.



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## INTRODUCTION

The National Commission on Allied Health Education (NCAHE) was formed in 1977 for the purpose of conducting a two year study on allied health education in the United States. The study was supported by a grant from the W.K. Kellogg Foundation to the American Society of Allied Health Professions (ASAHP), but the Commission was independent of ASAHP in undertaking the study and formulating recommendations (1-3).

The fifteen member Commission, which included leaders in allied health, nursing, and medicine, was charged with the responsibility of making recommendations on allied health education for the 1980's, based on assessment of the developments in the field during the past decade (1-3). After two years of studying and evaluating allied health education, the Commission proposed fifteen primary and sixty-three related corollary recommendations. Primary recommendations were formulated to provide major policy guidelines, while corollaries were intended to suggest means of attaining the goals implicit in the primary recommendations. The Commission's report was published in 1980 in a book entitled, The Future of Allied Health Education (3). The NCAHE recommendations reflect several basic themes:

1. Allied health personnel provide essential health care services, and these services will become increasingly important in the future for achieving national health goals.
2. Allied health education is essential for provision of a competent and sufficient health workforce. Allied health education should be viewed as a continuous, rather than discrete, process which has four components: basic occupational preparation, job education and training, advanced education, and continuing education.

3. The primary purpose of allied health education is to prepare students for health service; therefore, it is clear that educational processes must be related to practice needs and viewed as a means of achieving standard performance objectives. Role delineation projects offer the best available means for linking education more closely to practice needs.
4. Because of the dynamic nature of health service delivery, flexibility in the educational processes for preparing students to meet these performance objectives is essential for promoting growth, innovation, and progress.
5. The educational processes for health occupations should place the interests of the student or the public to be served above any special interest of educational institutions and professional groups.
6. To avoid duplication and waste, coordination of resources and collaborative problem solving are essential.

The recommendations address issues and problems in six major areas: strengthening alliances in service and education, determining appropriate content and level of educational programs, improving clinical education, building capability for leadership and innovation, providing for planning and administration without waste, and supplying adequate funding.

The recommendations are addressed to a wide audience, including administrators, teachers, students, professional groups, practitioners, providers, federal and state governments, regional planners, and private foundations. The Commission contended that the recommendations of general concern should be evaluated by many groups involved in allied health education (3).

The NCAHE 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 sizable segment of the health workforce, the composition of which varies depending on the occupations included as allied health (3).

Dietetics is considered an allied health occupation (4), and several coordinated undergraduate programs (CUP) and dietetic internships which prepare students professionally for entry-level practice in dietetics are housed in schools of allied health or health-related professions (5). Because of the relationship between allied health and dietetics, the dietetic profession should examine the Commission's recommendations for implications for the profession and particularly, for dietetic education.

The purpose of this research was to assess the importance and priority of each relevant recommendation of the National Commission on Allied Health Education for the dietetic profession and particularly for dietetic education. Through a review and revision process involving members and staff of the Commission and university faculty in dietetics and educational evaluation, NCAHE recommendations were revised slightly in considering potential relevance to dietetics. Also, corollary recommendations were omitted which were obviously not appropriate to dietetics or were directed specifically to ASAHP, rather than to individual allied health disciplines.

Members of the governance groups and major committees of The American Dietetic Association (ADA), presidents of state dietetic associations, directors of dietetic internships and coordinated undergraduate programs, directors of approved dietetic technician programs, and a random sample of dietetic practitioners were asked to evaluate the NCAHE recommendations for dietetics. The intent was to secure input from educators and policy makers in the dietetic profession. Also, the practitioner group was selected to permit evaluation from those in dietetic practice who were not involved directly in education or

governance, or in other words, to secure input from the "grassroots" of the profession.

Even though research in dietetic education has been reported in the literature, little has been concerned with the relationship of dietetics to allied health. If dietetics is to remain a viable allied health profession, the recommendations proposed by the NCAHE should be evaluated for possible incorporation in the current philosophy and curricula for dietetic education. Many of the issues addressed by the Commission, such as role delineation studies, clinical education, continuing education, and transferability of credit are mutual concerns for educators and practitioners in dietetics as well as for those in other allied health areas. Studying the primary recommendations and related corollaries which provide procedural guidelines for implementation of the recommendations should provide insight for establishing priorities within specific allied health professions. Since the NCAHE report is a major document related to allied health, each allied health profession should examine the recommendations for possible implications.



## REVIEW OF LITERATURE

### Allied Health and Health Care Delivery

According to the NCAHE (3), the meteoric rise of the allied health occupations in this country paralleled an equally rapid growth in the demand for many types of health services. Between 1967 and 1977, hospitals reported that inpatient visits rose by 26 per cent and outpatient visits by 78 per cent (6). The rate of surgery increased by 24 per cent between 1965 and 1975. In the four years between 1971 and 1975, emergency room visits per person per year doubled. Increased use of long-term facilities, emergency mental services, and dental services was also evident (7).

Factors contributing to the increases have been many and varied, including population growth and changes in private and public insurance coverage. Additionally, heightened efforts of the federal government to provide better access to health care for the poor, aged, minorities, and medically underserved populations influenced the use of health care (8).

Although the use of health services will most likely continue to increase in the future, the National Commission on Allied Health Education's Advisory Panel on Health Service Needs concluded (3) that the demand for health services would increase at a decreasing rate. The Commission reached this conclusion after careful analysis of several factors, including consideration of general social trends, disease prevention, and health education, access to health care, expanded concept of health, reimbursement patterns, and new technology.

## General Social Trends

NCAHE contended (3) that the growth of the population in future years definitely will affect the demand for health services. In 1960, United States population numbered 180 million; the estimate for 1980 is 225 million; and for 1990, over 250 million. The changing characteristics of the population, however, will influence the health care demand perhaps more than the numbers (2, 3).

The population of the United States is aging. By the year 2000, the over 65 age group will have grown by 40 per cent, and the 45 to 64 age group by 50 per cent. Coupled with an aging population is the prediction of a baby boom. Dickey and the National Commission on Allied Health Education purported that these trends will cause increased attention to the health needs of the very young and the very old (2, 3).

The increased education, urbanization, and affluence of the nation's citizens will influence the growth in the consumer movement. As part of this movement, educated citizens will be demanding better and more services in health care (9).

Dickey declared (2) that self-destructive behaviors, such as alcoholism and drug abuse give no evidence of abatement. In this area, therefore, the demand for health services is predicted to increase, particularly as the stigma traditionally associated with attaining treatment for these illnesses lessens.

The concept of health has expanded to cover mental health, and in the future it may well have a social component. The integration of mental health care into general health care has become recognized as a necessary step. The result of this integration could result in an increase in the demand for health care in this area (2).

## Disease Prevention and Health Education

In the United States, disease prevention has been recognized as a step toward improving the health of the nation's citizens (9). In the past decade, federal legislation was passed that addressed the need for consumer education and studies on disease prevention.

Section 1502 of the National Health Planning and Resources Development Act of 1974 (Public Law 93-641) dealt with the promotion of activities for nutritional and environmental factors and consumer education involving preventive health care (10). Title I, the National Consumer Health Information and Health Promotion Act of 1976, provided for a national program of health information, health promotion, preventive health services, and education in the appropriate use of health care (11). The importance of this act was discussed by Somers (12) who stated that for the first time the federal government recognized the crucial roles of individual knowledge, responsibility, and behavior in determining personal and national health status.

Somers argued (12) that health education for the consumer should become an integral part of health care at all levels; i.e., primary, secondary, and tertiary. She contended that failure on the part of doctors and other professionals to assume leadership on such issues as air and water pollution, cigarette smoking, overuse of drugs, food additives, etc. has not only contributed to patients' irresponsibility but has accounted for much of the overwhelming demand for health care services today (13).

With respect to the demand for health services, Dickey surmised (2) that it would be difficult to predict whether an emphasis on prevention and behavior modification would increase or reduce the overall

demand. He contended, however, that prevention would alter the nature of health services.

The role of allied health personnel in the area of consumer health and prevention has been addressed by many spokesmen in the allied health movement (14-18). Holder wrote (15) that most of the work of allied health personnel has been directed toward secondary and tertiary care. He contended that attention should be directed to preventive aspects of medical care in addition to curative and rehabilitative services.

#### Improved Access to Health Care

Rogers and Blendon stated (8) that efforts to improve access to medical care has resulted in positive results. They identified a principal concern in 1972 as the inequities in the availability of care for those who were poor or black or located in inner city centers of poverty or isolated rural areas. In 1931, people with low incomes saw physicians 49 per cent less frequently than did those with high incomes (19). By 1975, however, Rogers and Blendon reported (8) that the inequity in the availability of physician services had been largely eliminated and people of low income were seeing physicians slightly more often than those of high incomes.

In 1970, black Americans saw physicians 12.5 per cent less often than did white Americans (8). By 1975, this gap had largely disappeared and blacks, also a group with greater illnesses, were seeing physicians as frequently as whites.

The needs of the medically underserved population, estimated at forty-nine million, have been addressed by many federal, state, and private initiatives (3). The Rural and Urban Health Initiatives,

Migrant Health Programs, and Primary Care Research and Demonstration were cited by the NCAHE as examples of federal programs addressing needs of that group. The Social Security Amendments of 1965 (Public Law 89-97), which established the Medicare and Medicaid programs, was initiated to eliminate economic barriers to medical care in the United States (20).

Several legislative acts have altered the patterns of organization in health care delivery and have thus improved accessibility to health care, according to Kissick (21). Community Mental Health Centers, Comprehensive Health Services for Children and Youth, Office of Economic Opportunity (OEO), Neighborhood Health Centers, Regional Medical Programs, and Comprehensive Health Planning have been created in response to a search for effective institutional mechanisms for provision of health care.

Dickey stated (2) that the delivery systems which appear to have the most potential for the future include primary health centers, group health practices, and comprehensive health centers. Goldstein and Horowitz contended (9) that allied health personnel could have a substantial role in the staffing of these centers. For example, federal agencies are now placing renewed emphasis on the provision of preventive services and on community outreach, both of which utilize the services of allied health personnel significantly (3).

#### Reimbursement Patterns

Reimbursement is a major factor in the demand for health services which has increased in response to coverage of costs by third party payers (2, 3). The Rand Corporation estimated that Medicare-Medicaid legislation caused demand for ambulatory services to rise by 10 to 15

per cent (22). Many third party payment mechanisms have been blamed for consumer overuse of hospital services, which has resulted from more extensive coverage of inpatient services than outpatient services (23).

Coverage for hospital services is widespread among Americans. In 1974, approximately three out of every four Americans had at least some coverage for hospital services, surgical physician care, and outpatient X-ray and laboratory examinations. McCarthy reported (23) that 67 per cent of Americans were covered for some out-of-hospital prescription drugs, 60 per cent for some home and office physician visits, 16 per cent for some dental services, 33 per cent for some nursing home care, and over 60 per cent for some other nursing services.

A major concern of third party payers is appropriate utilization of services. Blue Cross and Blue Shield have invested over thirty million dollars in the development and maintenance of Health Maintenance Organizations (HMO). HMOs through their organization and provider payment incentives place emphasis on prevention, early detection of disease, and increased usage of ambulatory services (2, 24).

Generally, no incentive has been evident for third party payers to use lower cost personnel, as reimbursement is based on the cost of service rather than the skill level of personnel (3). With increased emphasis on reducing health care costs, however, third party payers may decide to reimburse at the level of the least costly practitioner qualified to perform a particular service, thus encouraging use of lower-salaried personnel.

The issue of national health insurance has provoked debate and controversy in the United States since the beginning of the twentieth century (25). Dickey predicted (2) that some form of national health

insurance would be in effect by 1990 with a comprehensive health insurance plan by the year 2000.

Dickey maintained (2) that the impact of national health insurance on the demand for health services would be limited and the demand would continue to increase at a decreasing rate. Other potential effects predicted from implementation of a national health insurance plan include increases in institutional settings for the elderly, services in ambulatory settings, numbers of Health Maintenance Organizations, and incentives to reduce inpatient services (2, 9, 20).

According to the National Commission on Allied Health Education (3), the impact of national health insurance on the utilization of allied health manpower will depend largely on what services in the ambulatory settings are covered and methods of reimbursement with decisions based on cost considerations. Goldstein and Horowitz predicted (9), however, that the implementation of a national health insurance policy would increase employment demand for allied health personnel by 50 per cent.

### Technology

The consensus of the Advisory Panel of Health Service Needs of the National Commission on Allied Health Education was (3) that total expenditures for new technology will increase at a decreasing rate and health care providers will continue to invest heavily in new technology. The Commission concluded that even though labor-saving devices may eventually reduce the overall demand for technical specialists, new technologies will continue to be introduced, thus rendering some kinds of skills obsolete but creating new demands for others.

## Employment Patterns

The hospital is the primary employer for personnel delivering certain allied health services (for example, clinical laboratory, dietetics, radiology, rehabilitation, respiratory therapy). About two-thirds of all allied health personnel, however, work in other settings including ambulatory facilities, nursing homes, laboratories, and private group practices. The NCAHE concluded (3) that the greatest growth areas in the future can be expected to be in nonhospital sites.

The Commission's Advisory Panel on Health Service Needs predicted (3) that even though there will be an increase in services provided outside of hospitals, the demand for hospitalization will rise in the near future, due to the anticipated rise in the over sixty-four age group, which has a hospitalization rate three and a half times the national average. The panel believed that the effects of hospitalization rates of any increased spending for prevention would not be felt for at least twenty years, but pressures on the part of third party payers for non-institutional care might impact within the next ten years. The panel concluded that there will be an increased demand for allied health personnel employed in hospital settings.

Dickey and Mahoney maintained (2, 26) that the prospects for all allied health occupations in hospital settings were not uniformly favorable. Hospitals have been urged to contain costs and thus have initiated efforts to attain their goals. The main approach to cost containment has involved people. Hospitals have been trying to increase productivity by changing utilization patterns and reducing staff while introducing labor saving devices (3).



In recent years, the number of allied health personnel employed in nonhospital based ambulatory settings such as neighborhood health centers, health maintenance organizations, and clinics has increased (3). For example, in the Boston area, 54 per cent of the staff employed in ambulatory settings in 1973 were allied health practitioners, mostly social workers, medical technologists, and radiology personnel (2, 3).

Swift et al. estimated (27) the proportion of the population enrolled in HMOs, which was only 2 per cent in 1979, may rise to between 6 and 28 per cent by 1990. They concluded that the effect of such an expansion would increase the demand for allied health personnel in administration, medical records, clinical laboratory, and dental and dietary services.

The Commission's Advisory Panel claimed (3) that ambulatory services will increase in the future, particularly if national health insurance covers such care, and that physicians will be increasingly likely to locate in these organized settings. The Panel further maintained that as services are broadened, ancillary services added, and task delegation becomes more prevalent in these settings, requirements for allied health personnel will increase, especially for those who can function in more than one occupational role.

An increased demand for well-trained allied health personnel will be necessary as federal emphasis is placed on alternatives to institutional care for the aged and handicapped (26). Home health services, such as part-time or intermittent nursing care, the adult day care center, and physical, occupational, or speech therapy, and other medical and social services can assist families in caring for the aged.

The NCAHE predicted (3) that the demand for allied health personnel in business and industrial settings would intensify in the years ahead. Concerned about rising health costs, employers have established many on-site health programs, ranging from small nursing stations to large primary care clinics. A wide variety of allied health professionals are employed in on-site health programs including medical assistants, dental hygienists, various therapists, and laboratory and radiology personnel.

Horowitz and Goldstein predicted (9) substantial growth will occur in the health care industry in the years ahead and as a result, in the employment of health personnel also. They cited specific factors which lead to the conclusion: (a) the current growth rate of inpatient facilities, (b) the current development and growth of ambulatory facilities, (c) the current growth rate of extended care facilities, (d) the upward trend in the sophistication level of medical care and service, (e) the growing level of expectation of health services by American consumers, (f) the gradual but continuing encroachment of allied health personnel on the functions traditionally performed by physicians, (g) the normal growth in demand for health services due to population growth, and (h) the probable passage of a national health insurance program.

The Commission on Allied Health Education asserted (3) that institutions which prepare graduates primarily for local employment must closely scrutinize local demand to assess employment need in a particular area. The Commission contended that better communication of manpower information at the state and regional levels could assure that the output of graduates in particular fields neither exceeds nor falls short of demand.

Dickey maintained (2) that allied health personnel can make a significant contribution in increasing access to health care while holding down

costs. He claimed the services that the allied health professions provide are relevant to today's concerns (for example, disease prevention, health promotion, mental and social health, drugs, problems of the aging) and to new settings (such as rural clinics, health maintenance organizations, hospices). Dickey argued that because these professions are relatively new and therefore not bound by tradition, educators and professional groups can provide leadership in developing a health workforce that can meet future service needs effectively, efficiently, and humanely.

#### Other Implications for Education

Allied health educators should be aware of changing health delivery settings, increased emphasis on prevention and consumer education, and the need for more broadly trained personnel. Allied health curriculums should include flexibility and adaptability to changing requirements, variances in practice environments, and orientation to comprehensive care (3).

Generally, the more broadly trained the practitioner, the more likely that practitioner will be able to find employment in health (3). Kinsinger purported (28) that in the presence of inflation and rising health costs, many hospitals, particularly small rural clinics, cannot afford highly specialized allied health personnel. Their requirement will be for the more flexible, broadly trained worker who will be able to function competently in more than one role. Holder argued (15) that allied health educators should develop programs to educate health care personnel to perform a variety of supportive functions as members of the health care team.

Much has been written about the need for identification of commonalities in roles and functions that can be translated into educational content of a more generic nature (15, 28, 29). The philosophy behind this reasoning is that ultimately clusters of occupational groups might develop a knowledge and skill foundation upon which specialty training could be built. Broad based generic curriculums would enable health personnel to adapt to changing technology more rapidly without creation of new subspecialties or professions. Despite possible obsolescence of a particular profession as a result of advanced technology and changing health care needs, knowledge acquired from generic courses would not be wasted (3).

The issue of new geographic settings for clinical programs, other than the traditional hospital site, has been discussed among allied health educators and spokesmen (18, 26, 30). In view of the increased emphasis on ambulatory care, Perry advocated (18) the expansion of a wider range of clinical settings including neighborhood health clinics, health maintenance organizations, and on-site health facilities in business and in industry. Additionally, the Commission believed that better integration of didactic and clinical education might allow students a wider choice of shorter term practicums in a number of clinical sites as opposed to a longer experience in one setting (3).

Preventive approaches to health care must be inculcated into the philosophy of allied health programs according to Pellegrino (14) and Holder (15) as the emphasis in medical treatment shifts away from acute or episodic care toward preventive medicine and health maintenance. Also, Holder contended (15) that the allied health practitioner should be skilled in participating in comprehensive health care treatment,

particularly as the holistic approach becomes a dominant issue in medical treatment. Classes involving behavioral sciences and human values are an integral part of allied health curriculum in order to prepare students to treat patients comprehensively.

### Allied Health Education

#### Definition of Allied Health

Allied health is generally applied to occupations whose primary function is to provide health services or promote health (3). Considerable confusion, however, surrounds the term allied health because it is used to describe different groups of health occupations in different settings and for different purposes (3, 31).

Some health occupations, particularly physicians and dentists, have been excluded historically from the allied health category (3, 31). Additionally, others have been omitted by definition in federal and state laws and associated regulations; for example, federal legislation defines veterinarians, optometrists, podiatrists, and pharmacists as separate from allied health personnel (3).

In a survey conducted by the National Commission on Allied Health Education of professional membership associations (3), the topic of allied health constituency was raised. In addition, the respondents were asked whether they considered their representative association to be an allied health association. Of the seventy-nine surveys received, 57 per cent of the respondents regarded their organization as an allied health association. Only 22 per cent thought that allied health was a useful descriptive label; many respondents believed that current usage of the term was inaccurate or misleading.

The NCAHE endorsed (3) the following definition of allied health personnel: "All health personnel working toward the common goal of providing the best possible services in patient care and health promotion." The Commission contended that the effective delivery of health services, now and in the future, depended on an appreciation of the significant contributions of each member of the health team.

The Commission described (3) allied health education as referring to the formal preparation of a sizable segment of the health workforce, the composition of which might vary, depending on the occupations included as allied health. The formal preparation can take place in a collegiate as well as noncollegiate setting, involve short term plus long term training, lead to a certificate or graduate degree, and range from basic occupational preparation to advanced education or various continuing education activities.

#### Origins of Allied Health

Since the turn of the century, the total health workforce has been growing and changing; this trend gathered momentum in the 1960's. The growth has been phenomenal from 345,000 in 1900 to 2 million in 1960 and 4.3 million in 1970 (32). At least twenty-seven new occupations including dental hygienist, dietitian, occupation therapist, physical therapist, speech pathologist, radiologic technologist, and medical technologist were established between the turn of the century and 1940 (3).

Between 1940 and 1965, many other occupations were established including medical record personnel, respiratory therapist, physician assistant, and a multitude of technicians and assistants whose functions supported the older allied health categories (3). In 1900, one in three

health workers was a physician (33). By 1960, physicians accounted for one in ten and by 1970 one in thirteen (34).

The allied health concept can be traced to 1929 when a program for training X-ray technicians was appended to the School of Nursing at St. Louis University, based on the belief that better education could be provided in a more economical manner through shared and coordinated education activities (35). In 1950 the School of Allied Medical Professions at the University of Pennsylvania, Philadelphia, was established (35). McTernan maintained that this institution might be considered the first true allied health school because the title and emphasis was allied or coordinated education, whereas the St. Louis alliance represented one program administratively housed under another separate educational activity.

In 1957, the College of Health Related Professions was established at the University of Florida, Gainesville, and the Division of Allied Health Services at Indiana University followed the next year. Until 1967, however, these earliest allied health units conducted business independently of each other and little communication occurred between the schools (35).

The Allied Health Professions Personnel Training Act (PL 89-751), enacted in 1966, gave impetus to allied health education. This act was designed to increase the opportunities for training of personnel in allied health occupations and to improve the educational quality of the schools training such allied health professions personnel (3, 36, 37).



## Formation of the American Society of Allied Health Professions

In 1966, hearings were being held in Washington on a proposed legislative program to stimulate the education of non-physician, non-nurse personnel, which led to the Allied Health Professions Educational Assistance Act of 1966 (38). Four pioneers in the field of allied health education were present, including Dr. Darrel Mase of the University of Florida, Aaron Andrews of Temple University, Dr. Robert Atwell of Ohio State University, and Dr. Warren Perry of the State University of New York at Buffalo (38).

As a result of the informal discussions held in Washington by the four men, Mase sought to organize a meeting of other allied health leaders from other institutions. Thirteen schools were represented at a meeting held in 1967. Out of the meeting emerged the organization originally known as the Association of Schools of Allied Health Professions, now entitled The American Society of Allied Health Professions (3, 38). McTernan declared (35) that allied health as a definable area of interest can be traced to that meeting.

The Association of Schools of Allied Health Professions was the first organization that addressed the broad concerns of allied health education, plus provided a forum for the sharing of ideas among institutions involved in allied health education (39). The Association was organized as an interdisciplinary, interagency, nonprofit, charitable, scientific, and educational organization for the purpose of providing leadership to the allied health professions (38, 39). The interests of the Society have broadened to cover a wider range of concerns including determination of needs, establishment of priorities, recruitment,



continuing education for the allied health professional, articulation, research, and other projects (39).

Another organization also gave further recognition and impetus to the formal preparation of allied health personnel (3). In 1966, the American Medical Association (AMA) established a Department of Allied Medical Professions and Services, out of which evolved the Committee on Allied Health Education and Accreditation. The AMA has been involved with the accreditation of allied health occupations for over forty years (40). In 1933, it helped to formulate standards for the accreditation of occupational therapy programs (3) and has since accredited programs for a number of allied health occupations (3, 40).

#### Transitions in Allied Health Education

The National Commission on Allied Health Education listed (3) three major changes which have occurred in allied health education since the inception of the movement in the 1960's. First, the number of programs, particularly in collegiate settings, has expanded significantly. In 1966, an estimated 2,500 collegiate programs existed; currently, over 8,000 programs exist. Secondly, the distribution of programs has changed. The greatest growth in the number of programs has occurred in settings other than traditional hospital or health service settings, such as medical centers and universities, two-year colleges, vocational technical institutes, and private career schools. Thirdly, the expansion of knowledge and skill requirements has led to a diversification of education levels ranging from short-term certificates to doctoral granting programs.

Over the years, allied health education has responded to changes and needs within the society. Mase described (16) allied health careers as

evolving from the needs of physicians and their patients. Initially, most students of new allied health careers were trained largely on-the-job under the direction of the medical specialist with whom they were working. The training focused on application and was linked directly to service needs (3).

The next phase began with the establishment of professional associations to represent group identity and collective needs of emerging occupational specialties and the formalization of education within the hospital (3). The National Commission on Allied Health Education described this heightening of occupational awareness as leading to sharp demarcation of boundaries, turf protection, tightening of entry requirements, initiation of credentialing processes, and movement away from apprenticeship type settings. Additionally, the professionalization move was marked by delegation of routine tasks to others. Mase, however, criticized (16) the professionals in their reluctance to surrender routine tasks.

The last stage in the development of formal programs for allied health personnel began with increasing collaboration between hospitals and educational institutions culminating in a shift of programs to collegiate settings. Issues involved in this transition included accreditation of programs, certification of personnel, and problems concerning clinical and didactic education (3).

#### Components of Allied Health Education

The National Commission on Allied Health Education endorsed (1) the concept of allied health education as a continuous rather than discrete process, with four components: (a) basic occupational preparation,

(b) job education and training, (c) advanced education, and (d) continuing education. The responsibility for the four components of allied health education are shared by educational institutions, employers, professional associations, and the individual (3, 41).

Basic occupational preparation programs are designed to provide students with knowledge and skills needed to work in a specific occupation at the entry level of that occupation. The intensity and extent of general education courses vary in different occupations depending upon the occupation, the length of the program, and the setting in which it is offered. The occupationally specific component includes studies and practice leading to the competencies required for entering the occupation.

The National Commission on Allied Health Education contended (3) that although the basic occupational preparation programs provide a graduate with entry-level competencies and in certain cases broadly based skills, special on-the-job education or training programs are usually required to meet employer needs and to fit the graduate into the framework of the particular employer's procedures, systems, equipment, and facilities. Organized, on-going programs provide continuing education on an advanced professional level. Job-specific preparation is provided in employment settings, although in some cases employers have entered into cooperative arrangements with educational institutions to conduct these programs.

The term advanced education refers to formal postprofessional studies that supplement the basic occupational competencies of health personnel. Advanced education may lead to additional clinical mastery and specialization or acquisition of nonclinical skills such as teaching, administration, or research.

Continuing education for health professions has been defined as any organized educational program or experience designed to assist a health care provider in maintaining or improving the level of competence necessary to perform current responsibilities in a manner consistent with the most recent advances in the field (3). Ducanis and Galin stated (42) a major advantage of continuing education programs is that the practicing professional who sees the need for additional skills in a particular area is highly motivated to learn.

Continuing education programs are generally offered by academic institutions, professional associations, employers, and commercial groups (41). Continuing education has been emphasized as a vital, integral component of allied health education (16, 17). Mase stated (16) that with the continuing knowledge explosion there is no way to think of any point of education as being terminal to the needs of the individual.

#### Concerns of Allied Health Educators

After more than a decade of existence, several predominant issues characterize allied health education. In 1978, the National Commission on Allied Health Education conducted (30) an informal, open-ended survey for the purpose of learning what program directors perceived as major problems facing allied health today and the major issues for the near future.

The most frequently mentioned issues were those concerning definition (identity), credentialing, funding, roles of educational settings, clinical affiliations and other institutional arrangements, and curriculum. Additionally, respondents cited continuing education, students, faculty and administration, delivery systems and consumer needs, and

research and information needs as issues and concerns in allied health education.

Holmstrom et al. regarded (30) the question of definition (identity) as the fundamental issue in allied health. Respondents were concerned as to what comprised the allied health fields, how allied health could be better represented before the public, and the problem of independence/dependence/interdependence in the allied health professions. Additionally, under identity, some respondents have perceived the proliferation of allied health education programs and occupations as leading to fusion, fragmentation, and waste of resources. Some respondents believed that unless competency requirements and responsibilities were more firmly established the proliferation of allied health occupations would continue to produce confusion, fragmentation, and mismanagement of resources.

The respondents also were concerned about the establishment and maintenance of national performance standards for allied health programs and practitioners. The process of accreditation was thought by some to require too much administrative effort resulting in high financial cost while inhibiting innovation.

Another frequently mentioned concern was the scarcity of funding for allied health relative to other professions. Respondents believed that funding on both an absolute and comparative basis and at the federal, state, and local levels was inadequate, particularly in view of the high cost of modern equipment and instrumentation for allied health education. Alarm was expressed over the upgrading of academic degree requirements for some allied health and nursing personnel and related costs.

Directors of programs in two year colleges were concerned particularly about the future role of their type of setting in educating allied

health personnel. They predicted that efforts to upgrade academic degree requirements by professions would result in an oversupply of baccalaureate level graduates and depressed market value of the associate degree.

Directors of universities believed that the baccalaureate degree provided potential leaders in health with a strong background in basic sciences. Additionally, others pointed out that graduates of four year schools were more flexible and better able to adapt to technological change than graduates of two-year programs.

Providing adequate clinical training to students was a major problem expressed by some program directors. Issues concerning the high cost of affiliation with clinical sites, financial responsibility for clinical faculty, and retention of control of clinical training were listed (30).

#### Issues and Problems Identified by Allied Health Leaders

Leaders and spokesmen in the allied health field have voiced many of the same concerns expressed by educators in schools of allied health. Pellegrino and others (17, 28, 29, 44, 45) identified the proliferation of allied health occupations with the continued trend toward fragmentation, specialization, and resultant health manpower overproduction as a major issue in allied health.

Pellegrino described (14, 29) proliferation as resulting in a confusing array of technical and professional personnel working in compartmentalized tasks, often closely overlapping each other in some facet of their work and frequently out of communication with each other about the patient whom they both serve. He urged the utilization of task analysis for assessment of commonalities and functions among various

allied health occupations for the purpose of reducing duplication of tasks and increasing coordination among professions. Pellegrino and others have contended (17, 29) that after identifying common components, a common education in the basic and social sciences should be provided along with special features each job requires.

To correct the potential problem of health manpower overproduction, Perry has urged (17) administrators of allied health programs to conduct periodic research of their graduates to analyze if they are being utilized in the field for which they are being trained. Perry believed this assessment was necessary to assure that the graduates are being appropriately placed and will be involved and needed in the health care system of the future. Mase argued (44) that administrators in technical-vocational schools, community colleges, colleges, and universities must be prepared to phase down or up the number of students accepted into allied health curricula as available data indicate that an oversupply or an undersupply in a respective category is anticipated.

Many spokesmen in the allied health movement identified (17, 41, 44, 46) continuing education as crucially important in the future of allied health education. Boatman and Mase contended (46, 44) that the concept of a terminal education was no longer valid and must be replaced with a commitment to lifetime learning. Perry declared (17) that expanded duties and new settings for delivery of services require a commitment to continuous relearning and the maintenance of competency through continuing education.

Perry contended (17) that graduate education programs would have to deal with a definition of the changing roles of the health professional. Graduate programs, he asserted, would be based on new competencies needed



by the professional. He maintained that new competencies would enable the practitioner to respond to changing needs in the hospital environment and in various health care settings and to assume a role in consumer education and health delivery planning activities.

Mase (16) and Pellegrino (29, 14) supported the premise that future allied health careers will be found primarily in the area of prevention and well-being. The importance of prevention has received broad recognition in all discussions of national health care policy (17).

#### Collaboration in Allied Health Education

In an era of fiscal austerity, collaboration increasingly is being viewed as essential for meeting organizational and administrative challenges (3). Collaborative arrangements in allied health generally are guided by one or more of the following purposes: (a) special manpower purposes such as program needs of rural areas; (b) resource utilization purposes, for example, to meet program needs for expensive equipment and facilities and to avoid unnecessary duplication of resources; and (c) student-oriented purposes, for example, to provide opportunities for the transition from one program to another without unnecessary duplication of learning.

The National Commission on Allied Health Education reported that transfer between disciplines was difficult. They believed that an important step toward facilitating transfer between disciplines in the same institution or in different institutions should be knowledge and appreciation for commonalities in functions, continuities in skills and knowledge base, and shared objectives, values, and goals (3).

Interdisciplinary education is an example of intrainstitutional collaboration (3). Interdisciplinary education in allied health has been



developed to provide students insight into role competencies of other professionals, improve the quality of health care while reducing costs, and facilitate the interdependent functioning of allied health care providers in meeting patient or client needs (17, 47).

One of the conclusions of the Steering Committee for a 1972 conference on interdisciplinary education was that the ultimate goal must be to utilize health manpower better in order to make health care available that is more comprehensive, effective, and compassionate (48). The committee recommended that students in health teams be exposed to an interdisciplinary effort, defined either as interdisciplinary in student or faculty composition, or both, at the earliest possible time and that the curriculum emphasize the social and behavioral sciences.

Connelly identified (49) institutional barriers (curriculum, accreditation, and schedule) and educational barriers (different objectives and different levels of students and definitions of clinical experience) as roadblocks to establishing interdisciplinary programs on campuses. The National Commission on Allied Health Education identified (3) the reluctance on the part of many allied health groups to participate in collaborative efforts as a major barrier in the establishment of interdisciplinary education in allied health.

The Commission believed (3) that an essential component of interdisciplinary education was the establishment of common course content often called core. Discussions of core curriculum for allied health are often confused by a lack of definition according to Hawkins (50). He defined core curriculum as that central course or group of courses taken by all students in a school of allied health professions.

In 1973, the Association of Schools of Allied Health conducted (51) a study to examine and prepare a state of the art report on the core concept as it was being implemented in allied health professions educational programs. The report concluded that core curriculum in allied health education was not singularly definable but could be described as uneven, individualized, and not comparable in the aggregate.

The Association identified (51) common objectives that were sought through existing curriculum plans entitled core including: (a) relevance of training for work; (b) encouragement of communication among the allied health categories, ultimately leading to the delivery of health services by a health team; (c) interdependence of behavioral and social sciences with the physical sciences; and (d) a problem solving approach to training. Hawkins cited (50) additional advantages of core curriculum as creating more efficient use of faculty time and providing horizontal mobility in the health fields. The National Commission on Allied Health Education argued (3) that utilization of core curriculum in schools of allied health could serve to reduce costs associated with duplication of educational efforts.

### Educational Settings

The formal postsecondary programs preparing allied health personnel are housed in a variety of settings. Lack of reliable data, however, has made the description of the growth and changes in numbers and characteristics of allied health programs difficult (3).

According to information published in 1976, an estimated 14,000 formal postsecondary programs preparing allied health personnel were in existence. These survey results and estimates showed that 52 to 54 per

cent of allied health programs were housed in collegiate settings, 33 to 35 per cent in hospitals, 10 to 12 per cent in postsecondary noncollegiate institutions, and 1 per cent were conducted by the Armed Forces. By 1976, collegiate settings had become the sector with the largest number of allied health programs (52, 4).

In 1973 and 1976, the American Society of Allied Health Professions (ASAHP) conducted (52, 4) surveys to assess the numbers of allied health programs located in the nation's institutions of higher learning. Seven thousand programs were identified that met the following criteria: (a) award of a degree or certificate given as recognition of achievement, (b) students currently enrolled, and (c) at least thirty-six hours required for completion. An estimated 1,500 additional programs did not meet these criteria.

ASAHP found that over half of the 3,000 U.S. institutions had at least one allied health program. Seventy-one per cent of public collegiate institutions versus 37 per cent of private collegiate institutions had at least one program. Sixty per cent of two-year colleges had at least one program as compared to 49 per cent of the four-year institutions (52).

In 1976, six in ten allied health programs were in four-year colleges and universities compared to over nine in ten in the 1950's. The growth in the numbers of programs in two-year colleges is evidenced by a comparison of program establishment dates reported in 1973-74 and 1975-76 ASAHP survey questionnaires. The survey showed that three in five allied health programs in four-year colleges and universities were established before 1970, whereas over three in five allied health programs in two-year colleges were established after 1970 (52).

Medical schools contributed greatly to the establishment of the early programs for allied health occupations (1). Many were initiated at the teaching hospitals and then gradually moved to the medical schools. In the past decade, two-year colleges, schools of engineering and technology, other health professional schools, and schools of business management also have established allied health programs. The rapid growth of collegiate health programs, however, that occurred during the period from 1965 to 1975 has lessened somewhat (52).

The 1975-1976 ASAHP survey identified collegiate programs for 139 single occupational categories (4), which were grouped into twenty-eight major areas. Of the twenty-eight major occupational categories, nine accounted for two-thirds of the allied health programs in collegiate settings; clinical laboratory services, 17 per cent; administration, planning, and office, 8 per cent; health related teacher preparation, 7 per cent; dental services, 7 per cent; speech and hearing services, 6 per cent; dietetic and nutritional services, 6 per cent; nursing related services, 5 per cent; radiological services, 5 per cent; and health education, 4 per cent (4).

Eighty-five per cent of allied health programs responding to ASAHP survey in 1975-76 were basic occupational preparation programs. Ten per cent were advanced education programs, 3 per cent were teacher training programs, and less than 1 per cent were continuing education programs (4).

In 1976, students in allied health programs comprised about 2 to 4 per cent of 11 million degree-credit and non-degree credit enrollments in colleges and universities. Women predominated among students of allied health programs. They composed about three-fourths of the students in

both two-year and four-year institutions. Black students composed only 8 per cent of enrollments in basic occupational allied health programs in four-year colleges and universities, compared with 12 per cent in two-year college programs (4).

#### Schools of Allied Health

The concept of allied health education and the growth of schools of allied health professions are linked historically. Allied health and allied health education were developed on the assumption that an alliance in education among health occupations, which separately had little visibility, would build the prestige, strength and quality of education. The NCAHE argued that an alliance in education would strengthen teamwork and encourage sharing of resources (3).

Allied health units have been established in many states across the country since the concept originated in 1967. In the 1978-1979 academic year, sixty-six schools or colleges of allied health were in existence; forty-four had the words allied health in the title; the remaining twenty-two contained the words associated health, health related professions, health technologies, or health sciences. Two-thirds of the sixty-six schools were on medical campuses, of which most had other health professions schools as well. On other campuses, allied health programs were grouped in divisions, departments, and centers. These units were found in both four-year and two-year institutions, as well as in hospitals and other non-collegiate settings (3).

Panel members of the NCAHE believed that allied health units increased visibility and power (as indicated by the ability to obtain financial support and implement programs) of allied health programs.

Barriers, however, to obtaining resources and developing a strong school of allied health included: the variety of allied health degrees, as contrasted to the single degree in medicine or dentistry, which limited visibility; the low level of federal support to allied health education; and restriction of many allied health programs to the undergraduate level thus reducing research capability, another source of recognition and prestige (3).

Allied health schools have contributed significantly to leadership development, innovation, and research. Allied health units have stimulated scholarly contributions including Journal of Allied Health articles published by persons employed in these units. The growth in number of books relating to allied health showed a similar pattern (3).

The Commission's survey panel cited an obvious advantage being housed in a health science center as the potential for allied health students and faculty to interact with students and faculty from various health professions schools. Avenues to interaction were identified as interdisciplinary activities in didactic education, interdisciplinary activities in clinical education, research projects, and committee work. The National Commission on Allied Health Education contended (3) that collaboration among allied health program directors and between allied health and other health groups will enhance the cost-effectiveness of the educational processes by accelerating the development of a common knowledge base and reducing unnecessary duplication of effort.

## Dietetic Education

### Historical Background

The art of dietetics can be traced to early days of the Civil War when women practiced dietetics in conjunction with nursing in hospitals in their homes (53). Not until after 1890, however, did the dietitian trained in home economics rather than nursing teach student nurses about the feeding of patients.

Cooking schools were developed in the 1870's, 1880's, and 1890's to fill a need for instructing young women interested in domestic arts (53, 54). Because the first need for a dietitian was to teach simple cookery to nurses, the graduates of early cooking schools became the first instructors (55).

Interest in the scientific principles of cookery developed rapidly and in 1890, the New England Kitchen was started to apply these principles to the cooking of less expensive foods (53). Also in that year, Talbot introduced a course in sanitation and dietetics at Wellesley College.

In 1903, Corbett established a three month course for "pupil dietitians" at the Department of Charities of New York (53, 54). Corbett believed (53) that graduates of domestic science courses needed additional experience in hospital work before taking positions of responsibility.

In the early 1900's, several meetings, known as the Lake Placid Conferences on Home Economics, were conducted with one of the intended purposes of laying the groundwork for the development of home economics curricula in educational institutions (53). At the Eighth Lake Placid



Conference in Home Economics in 1906, McCollough maintained (54) that dietitians should receive adequate technical training in addition to theoretical courses provided by schools of domestic science. In speaking to dietitians assembled at the American Home Economics Association meeting in 1909, Boos recommended (54) the establishment of a one year post graduate hospital course in dietetics.

In 1910, Corbett outlined (56) groups of courses fundamental to the technical training of the dietitian. She argued that despite adequate instruction in didactic courses dietitians were not exposed sufficiently to laboratory and "practice" work for competent practice in the field. She recommended that the length of time required in preparation for work as a dietitian be lengthened to include the fundamental college courses plus six months to one year of practice work under supervision.

#### Formation of The American Dietetic Association

In 1917, The American Dietetic Association was founded. Four sections were established, one of which was entitled Teaching (57). This group was concerned with defining the role of the dietitian and the educational needs and with developing educational standards for the profession.

In 1924, Wheeler, as Education Section Chairman, presented to The American Dietetic Association minimum specifications for a course for student dietitians (54). The plan included recommended basic courses in a four-year college course for student dietitians, plus at least six months of hospital experience to include administrative, therapeutic, and social service work (58). Educational requirements for active membership in the Association were adopted in 1925 (58), which included



a bachelor's degree with a major in foods and nutrition from a recognized college or university.

In 1927, the Association approved a "Standard Course for Student Dietitians" based upon a study of the work of 310 hospital dietitians, seventy of whom were offering a course for students (55, 59). The hospital providing training was required to be a member of the American Hospital Association, have an accredited nurses' training school, and employ staff dietitians eligible for membership in The American Dietetic Association (60). Students entering the internship for the first time were required to have bachelor's degrees with majors in food and nutrition. Prior to 1927, students from two year courses had been accepted. The course was to be at least six months in length with time allotted for administrative practice, diet therapy, and teaching (60).

Based on information obtained from 116 departments of home economics in which dietetic students were enrolled during the academic year 1931-1932, the Education Section of the Association presented an approved list of academic requirements. This list included subjects and semester hours which the Association had designated as essential to provide satisfactory academic preparation for student dietitians (61).

#### Revisions in Educational Requirements

Academic requirements, considered prerequisite requirements for membership in The American Dietetic Association, have been revised periodically as technologic and cultural changes have altered the job requirements of the dietitian (54). The first revision, effective in 1934, detailed the course and semester requirements for food and nutrition majors, as well as the institution management course that had been approved by the Association in 1933 (58).

Subsequent revisions added courses in biochemistry, quantity cooking, organization management, and English composition (62). Additionally, specific recommended subjects were listed (63). In 1947, the academic standards were revised to indicate courses necessary for graduates entering approved hospital, food clinic, or administrative internships (54). This plan was entitled "Plan I," and was effective until 1962. In 1955, a "Plan II" was created as an alternative plan to Plan I. Course requirements were categorized into four subject matter areas and specific minimum credit hours for each group were detailed with a maximum of sixty credit hours listed. Plan II remained in effect until 1965 (54, 63).

In Plan III, adopted in 1958, subject areas of learning were classified as "Core Subjects," "Emphases" (foodservice management, education, and foods), and "Concentrations" (therapeutic and administrative dietetics, business administration, and science). The core subjects were required for all students with selection of one area of emphasis and one of the concentrations to complete the program. Plan III was phased out between 1975 and 1980 (54, 64).

Plan IV, the most recent revision, became effective in 1972, and was implemented fully in 1980. Academic requirements for Plan IV were expressed in terms of basic competencies and clinical experiences (54).

#### Recommendations of the Study Commission on Dietetic Education

In 1970, the Study Commission on Dietetics was formed under the chairmanship of Millis (65, 66). The Commission came into existence at the request of the Executive Board of The American Dietetic Association and the governing board of the ADA Foundation. All members were noted

for their concern for the advancement of education and health services of many kinds (66).

The Commission listed (65) several findings and made recommendations in their study of the profession of dietetics. In the opinion of the Study Commission, the existing system of educating and training dietitians was deficient in several ways. The Commission contended that the amount and quality of nutrition science learning seemed inadequate to form a firm base for the practice of a health service. Additionally, the Commission theorized that education would be more effective and more efficient if science and art were learned concurrently.

The Commission stated that dietetic education appeared to lack a clear identity within higher education and its institutions. They argued that as a health science dietetic education was not sufficiently related to other health professions (65). As one of their recommendations (Recommendation I), the Commission declared that the basic education of dietitians be designed as a four year curriculum resulting in a bachelor's degree including both the didactic learning and introductory clinical experience necessary for beginning practice.

In 1971, the Coordinating Cabinet of The American Dietetic Association appointed (67) a committee to study, evaluate, and make recommendations for implementation of the Report of the Study Commission on Dietetics. Of the Commission's recommendations, the Task Force fully accepted Recommendations II and V, both of which were concerned with education. Recommendation II suggested that the undergraduate curriculum in dietetics be built around the central theme of the Human Life Cycle (65). Recommendation V advised ADA that they not undertake, at that time, any responsibility for accrediting educational institutions in

dietetics per se. The Task Force reserved (67) full acceptance of Recommendation I related to four-year programs including clinical and didactic learning experiences pending an in-depth study by an ad hoc committee.

#### Trends in Dietetic Education

As a result of the Commission's report, many changes in dietetic education have occurred within the past decade (68). Of significance has been the growth in the numbers of coordinated undergraduate programs (CUP). According to several authorities (65, 66, 68), this movement was initiated due to several factors: the shortage of dietetic internships, the desire of ADA to provide adequate undergraduate clinical and didactic experiences required for practitioner status, the increased emphasis on the team approach to health care, and the recommendations of the Study Commission on Dietetics which emphasized the desired expertise of the dietitian and the educational approach necessary for development.

Lewis and Beaudette described (68) the coordinated program in dietetics as integration of the didactic and clinical phases during the undergraduate years. They contended that the didactic and clinical phases are of equal academic importance, rank, and degree in a coordinated program. Unlike the traditional patterns, a coordinated program is characterized by interrelated studies in the classroom and clinical environment.

The number of coordinated undergraduate programs in dietetics has risen substantially since the Study Commission's Report in 1972 (5, 69). In 1970, The American Dietetic Association's Directory of Dietetic Programs listed two under organization and sixty-eight dietetic internship programs. In 1975, the number of CUP's had grown to fifty-one,

while the number of internships remained at sixty-eight (69). In 1980, seventy-one CUP's and seventy dietetic internships were included in the listing of accredited programs (5).

Hart summarized (70) the changes that have occurred in dietetic education since the implementation of coordinated undergraduate programs. She noted that curriculum revision has been widespread, long-used syllabi have been replaced with annually revised editions, innovation in instructors' teaching methods have been effected, and an expanded range of clinical settings has been utilized. Hart maintained that evaluation of the program, instructors, and students is more intense in the coordinated programs than in traditional dietetic programs. Instructors must serve as role models for their students as they demonstrate the required competencies and thus, are a powerful influence on the students' life and performance.

Competency-Based Education. Concurrent with the rapid increase in coordinated undergraduate programs has been a move toward competency-based education (CBDE) (66). This process requires identification of the role of the practitioner and the level of competence the student will need to enter the field (70).

Bell defined (71) competency as the minimum knowledge, skills, affective behavior and/or judgment which a person is certified to possess on a set of criteria and level of expectation. Hart asserted (70) that competency-based education differs from the traditional approach in that emphasis is placed on the learner and the learning process rather than the teacher and the teaching process. Whereas the traditional approach may focus on the needs and expertise of the dietetic instructor,

competency-based education focuses on the needs and accomplishments of the student.

Bell listed (71) the four basic components of competency-based education: statement of behavior, subject matter, learning opportunities, and education. According to Bell, behavior is an essential component of all competency-based programs. She contended that behavioral objectives should include both the behavior desired and the content or area of life in which this behavior is to operate.

Bell further maintained (71) that in competency-based education students must be given ample learning opportunities or activities. She described a learning opportunity as an arranged situation in which the student has the possibility of engaging in the desired behavior.

The essential elements of a performance-competency based dietetic education include the delineation of role-derived dietetic competencies, which are stated publicly in behavioral terms. The criteria used to measure the accomplishment of these competencies are criterion-referenced and the student acquires the competencies at his/her own rate. Hart stressed (66, 70) the urgency in identifying universal dietetic competencies.

The objective of the Foodservice Systems Management Council (FSMEC) is to contribute to the development and evaluation of educational programs in foodservice systems management (72, 73). At the eighth conference of FSMEC held in 1977, participants identified foodservice management competencies, terminal performance objectives, and enabling objectives essential for entry level dietitians (72). In 1978, participants of the ninth FSMEC conference refined the document and developed evaluation strategies (73).

A number of studies have been conducted during the past decade on the identification of competencies needed for various aspects of dietetic practice. The objective of Loyd and Vaden's study (74) was to obtain information from hospital dietetic practitioners concerning their expectations of the performance or competency of entry-level dietitians. The practitioners identified twenty-three of the list of forty-seven administrative competencies as "essential"; eighteen as "desirable"; and six, "beyond entry-level." Fourteen of the thirty-five clinical competencies were considered "essential"; sixteen, "desirable"; and five, "beyond entry-level." Loyd and Vaden underscored the value of the competencies as the starting point for development and evaluation of curricula in dietetic education. Furthermore, they contended the competencies could be the basis for terminal performance objectives, enabling objectives, course content, and didactic and clinical learning experiences.

The focus of Slomski's research (75) was on the determination of entry level competencies required by a beginning generalist dietitian. For this study, a survey was conducted of ADA dietitians in Mississippi who had hospital experience. The purpose of Holmes' study (76) was to identify competencies perceived essential by dietetic educators for both coordinated and traditional undergraduate dietetic program graduates. Bedford developed (77) a set of affective competencies and identified related measurable behaviors for the entry-level dietitian.

Baird (78) conducted a study to determine the dimensions of the roles of the hospital administrative dietitian and the hospital clinical dietitian, as perceived by practitioners in these two areas. She believed that the identification and description of dimensions of a specialty were crucial to the development of specialty competencies.



She used the same list of competencies used in the Loyd and Vaden study (74).

The purpose of Morales' research was to develop a methodology to analyze competencies in an area of dietetic practice, that of menu planning (79). A random sample of administrative and generalist hospital dietitians rated ninety-two descriptors within menu planning competencies as to importance and time allocation.

Competency statements have been used by researchers in the evaluation of practitioners and dietetic professional programs. Rinke's study (80) involved employers' perceptions of the educational preparation in administration of entry-level generalist dietitians. The perceptions were related to the dietitian's route of attainment: internship, CUP, traineeship, and advanced degree program. Sixty-nine specific administrative competencies were used to assess the dietitians' academic preparation.

Meeks conducted (81) a study to evaluate dietitians' perceptions of the adequacy of their professional education in preparing them for entry-level practice. Meeks used thirty-six "essential" and five "desirable but not essential" administrative competencies identified by Loyd and Vaden (74).

The objective of Chamber's study was to develop and evaluate two equivalent forms of a criterion referenced instrument (82). The instrument was to be used in assessing the achievement of students graduating from undergraduate programs in general dietetics. Competencies to be measured were the academic requirements of Plan IV for the professional sciences required for membership in The American Dietetic Association.



Luhr developed (83) an instrument to measure student achievement of competencies at the University of Kentucky.

In 1978, the Administrative Committee of the ADA Council on Education Preparation commissioned a task force to develop uniform competencies for the dietetic profession (84). The Task Force believed, however, that before competencies could be developed certain issues needed to be addressed. The Task Force proposed that their committee be charged with the following objective: to develop a conceptual framework for the profession of dietetics that would serve as essential preliminary work for competency-based education.

Education of Supportive Personnel. Education of supportive personnel in dietetics has its origins in 1942 during World War II. Members of ADA recognized the need to delegate many of their tasks to non-professional personnel so that the time of the dietitian could be utilized more effectively (85).

Williams wrote (86) that between 1945 and 1950, leaders in the profession emphasized the need to develop the dietitian's executive ability, including the functions of policy-making and overall management and delegating routine tasks to non-professional personnel. During this time the title "food service supervisor" was chosen as most suitable for the non-professional worker who was to assist the dietitian in routine administrative tasks.

In 1955, the "Tentative Trial Outline of Classroom Instruction--the Training of the Food Service Supervisor" was published (85, 86). This outline was to serve as a guide for establishing a standardized educational program for foodservice supervisors. The ADA committee proposed

that the course be offered in two parts; i.e., ninety hours of classroom work (in a vocational school) followed by a second semester of supervised practice in a hospital. From 1955 to 1960, training programs were established in various parts of the country, usually in cooperation with adult and vocational high school systems (86).

In 1965, the ADA Committee to Study the Education of the Food Service Supervisor revised the 1955 "Tentative Trial Outlines." The resultant publication, entitled "For the Education of the Food Service Supervisor," described the standards for an approved training course in both classroom and supervised work experience. The outlines covered a minimum of ninety hours of classroom instruction and thirty-six weeks of supervised experience (86).

By 1971 an offshoot of the allied health movement, the career ladder concept, was identified with the levels in the dietetic team as dietetic assistant, dietetic technician, and dietitian (86). As the career ladder encouraged progression from dietetic assistant to the technician level culminating in an Associate Arts degree, the training moved toward credit courses on junior college campuses.

The American Dietetic Association has published Essentials of an Acceptable Program of Dietetic Technician Education (87), and a similar publication regarding dietetic assistants in an effort to establish minimum qualification standards for both educational programs and for the expected job competency of the graduates (88, 89). The guidelines for dietetic assistant programs required a coordinated program of not less than ninety hours classroom and 150 hours supervised field experience and recommended a one-year program of thirty units credit and 225 hours supervised field experience (89). The guidelines for the technician

program required a curriculum specializing in nutritional care or food-service management, leading to the Associate of Arts degree, plus 450 hours of supervised field experience (87). According to the 1980 Directory of Dietetic Programs (5), fifty-one dietetic technician programs and 223 dietetic assistant programs were in existence.

Woodward wrote (88) of past developments and future directions in the utilization of dietetic supervisory manpower. She described the support by ADA of dietetic technicians and assistants including publication of a Position Paper (90) detailing the definition and education of these groups, the sponsorship of ADA of programs which meet its educational standards, and the endorsement of technician membership in the Association.

#### Allied Health and Dietetic Education

In the opinion of the Study Commission on Dietetics in 1972, the greatest weakness in the dietetic education programs was the absence of a "dietetic learning environment." One of the ways the Commission believed that the dietetic learning environment could be strengthened was to integrate the dietetic curriculum with schools of allied health. The Commission contended that this innovation would provide two key advantages to dietetic students: (a) students and teachers would be in close association with other professionals with whom they would practice collaboratively in the future; and (b) students would not have to meet education requirements designed for students in the school of home economics or education (65).

Since the publication of the Report of The Study Commission on Dietetics in 1972, the number of coordinated undergraduate programs

associated with schools of allied health or health related programs has risen. In 1972-1973, three of nine approved programs were housed in schools of allied health, and in 1980, fourteen of seventy-one accredited CUPS were affiliated organizationally with allied health. This number, however, has remained constant since 1978 (5, 69).

In the late 1960's, legislation was passed to support the education of allied health personnel. Because it is considered an allied health occupation, dietetics was able to receive financial assistance provided through the Basic Educational Improvement Grants and the Traineeship Grants of the Allied Health Professions Personnel Training Act of 1966 (91). Grants were awarded to a number of institutions offering baccalaureate programs in dietetics and those with dietetic technician associate degree programs.

Between 1972 and 1978, dietetics received 270 allied health project (institutional support) grants, totalling \$14,143,000. Between 1972 and 1978, 208 long-term advanced traineeship grants totalling \$3,674,000 were awarded in dietetics. These grants were awarded to students obtaining advanced degrees in order to work as teachers, supervisors, administrators, or specialists. The number of short term allied health training institute grants for dietitians totalled twenty-one between 1972 and 1978 and supported 1289 trainees. These programs were designed to provide short term training essential for updating and improving the educational or administrative skills of dietitians (92).

#### Professions and Professionalism

Little agreement exists among the social scientists as to precise meanings of profession, professionalism, and professionalization (93,

94). According to Blankenship (93), professions are often identified on the basis of certain structural characteristics. The structural approach encompasses five factors: (a) a profession must be a full time occupation, based on specialized knowledge; with (b) training schools that are controlled by members of the profession; and (c) with an association that defines membership and offers self-regulatory mechanisms. Other structural characteristics include: (d) licensing or certification by a public agency and recognition from the community; and (e) a code of ethics that implies rights of autonomy and self governance.

Abrahamson defined (94) professions as those occupations which involve the use of knowledge and techniques by a practitioner directly upon, or in behalf of a client in order to maintain or induce in the client a culturally determined and socially approved state of well-being. Strauss described (95) professions as a relatively homogeneous community whose members share identity, values, definitions of role, and interests.

Blankenship argued (93) that professionals often exhibit certain attitudinal qualities. Typical characteristics include a sense of commitment and identification with the professional association, a desire to dedicate oneself to service rather than selfish pursuits, and a rejection of efforts of nonmembers to regulate the profession. Additionally, a feeling often exists that members are called to the profession by personal motives so that work would be accomplished despite remuneration. Finally, professional members value the autonomy principle highly and believe that high rewards are justified.

McEvoy defined (96) professionalism as an ability to perform one's function in a proficient and effective manner demonstrating expertise. According to Kornhauser (97), a primary function of professionalism is

the protection of standards of excellence in the face of pressures for quick or easy solutions. Kornhauser believed four criteria are implied in the definition of professionalism: (a) specialized competence that has a considerable intellectual content; (b) extensive autonomy in exercising the special competence; (c) strong commitment to a career based on the special competence; and (d) influence and responsibility in the use of special competence.

Moore and Elliott suggested (98, 99) that professionalism should be regarded as a scale, rather than a cluster of attributes, with the various features of professionalism ranging along a series of continua. Elliott contended (99) that professionalism is part of a complex of factors, operating in different combinations in different situations.

Moore listed (98) the following criteria as characteristic of professionalism: (a) full time occupation; (b) commitment to a calling; (c) a defined organization, which implies members committed to a cause; (d) possession of knowledge and skills based on specialized training; (e) service oriented profession; and (f) autonomy. Ritzer contended (100) that both the occupational and individual continua should be considered in the analysis of professionalism. He argued that all occupations may be placed on a continuum ranging from the nonprofessions on one end to the established professions on the other. Having pinpointed the position of the occupation on the continuum, the question remains of the degree of professionalism of the individuals in the occupation.

Ritzer claimed (100) that a person's position on the individual professional continuum is dependent upon the possession and degree of possession of the following characteristics: (a) general, systematic knowledge; (b) authority over clients; (c) community, rather than

self-interest; (d) membership in occupational association; (e) training in occupational schools; (f) recognition by the public that he/she is a professional; and (g) involvement in the occupational culture. DeMarco wrote (101) that a professional continues to develop either positively or negatively, as long as the profession is practiced. She asserted that a crucial point in a professional's life is the awareness that previously acquired knowledge is not sufficient to adapt to changing times. The professional who strives for continuous professional growth is involved in social, cultural, physical, and political activities that will broaden individual perspective.

Weigley cited (102) specific characteristics acquired by an occupation in the process of professionalization: (a) the development of a professional association with membership requirements to bar the unqualified; (b) current practitioners control education, training, and admission to the profession; (c) certification or licensure may serve as a further control; (d) a name change is often effected to heighten status; and (e) a code of ethics with a service orientation is developed. Weigley asserted that the profession of dietetics has been proceeding along the continuum of professionalization since its earliest roots in the late 1800's.

## METHODOLOGY

### The Sample

The sample for evaluation of the National Commission on Allied Health Education (NCAHE) recommendations included national and state leaders of The American Dietetic Association, leaders in dietetic education, and a random sample of dietetic practitioners. Specifically, the sample was comprised of the following groups:

1. Members of 1979-80 governance groups and key committees of The American Dietetic Association, including:
  - a. Board of Directors
  - b. Commission on Operations
  - c. Executive Committee, Council on Education Preparation
  - d. Council on Practice and Chairmen of Dietetic Practice Groups
  - e. House of Delegates
  - f. Committee to Develop a Conceptual Framework
  - g. Commission on Accreditation
  - h. Committee on DT/DA Programs of the Commission on Accreditation
  - i. Commission on Dietetic Registration
2. Directors of Accredited Dietetic Internships and Coordinated Undergraduate Programs, and Approved Dietetic Technician Programs (listed in the 1980 Directory of Programs)<sup>1</sup>
3. Presidents of State Dietetic Associations, 1979-80
4. A random sample of dietetic practitioners

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<sup>1</sup>Source: Reference (5).



For the selection of the practitioners, a list of 400 members who met the following specifications was requested from ADA data processing:

1. Active, registered and nonregistered
2. Thirty years of age or older
3. Full-time employment status

The ADA computer services include capability to provide sequential samples of members according to criteria defined by researchers. After the list had been checked for duplications on the lists of leaders and educators, 200 practitioners were selected using a computer-generated list of random numbers.

The potential respondents were considered for selection based on one or more of the following criteria: (a) prominence in dietetic education, (b) recognized leadership of The American Dietetic Association, (c) involvement in the governing and/or policy-making bodies of ADA, (d) leaders of individual state dietetic associations, and (e) dietetic practitioners. Members of the national governance groups and committees were included in the sample because of their leadership in the profession of dietetics, and also, because of their ability to make or influence decisions pertaining to the profession. The state presidents were included to gain the perspective of state leadership and of potential future national leaders.

The directors of dietetic internships and coordinated undergraduate programs were selected because of their expertise in dietetic education and because ultimate implementation of recommendations would be their responsibilities. The directors of dietetic technician programs also were included because of the impact of the NCAHE recommendations on all levels of dietetic education.

The random sample of dietetic practitioners was selected to insure that the viewpoint of dietitians at the "grassroots" level would be included. The sample was comprised of dietitians who were actively involved in practice. Because of the nature of the recommendations, the educational research consultant recommended that practitioners with at least five years of experience be considered. Although the computer services at ADA did not have the capability to generate a list based on years of experience, a sampling based on age could be generated. The decision was made to select members who were thirty years of age or older because of the potential for these dietitians to have practiced for at least five years.

The sample totalled 607 potential respondents. In addition to the 200 dietetic practitioners, 243 national and state leaders and 164 dietetic educators were included.

### Instrument Development

#### Preliminary Instrument

The initial questionnaire was based on the fifteen primary NCAHE recommendations (3).<sup>1</sup> The plan was to ask respondents to evaluate each recommendation according to its relative importance for dietetics, using the following four-point scale:

- (1) Extremely important recommendation for dietetic education
- (2) Important recommendation
- (3) Somewhat important recommendation
- (4) Less important for dietetic education than other recommendations

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<sup>1</sup>Appendix A includes a listing of the fifteen primary and sixty-three corollary recommendations of the National Commission on Allied Health Education.

Also, the recommendations were to be rated on timeliness using the following indicators:

- (1) Urgent priority, recommendation needs immediate attention in the dietetic profession and in dietetic education
- (2) Important priority, but does not require immediate attention in dietetics
- (3) Action on the recommendation can be postponed; among least urgent for action in dietetics

Additionally, the participants were to identify the five recommendations they considered to be the most important for the dietetic profession and the five considered to merit immediate use of resources. A third section of the questionnaire consisted of selected demographic information for use in analyzing responses.

The fifteen primary recommendations proposed by the NCAHE were slightly modified by the research committee for relevance to the profession of dietetics. The committee consisted of two dietetic educators and an educational evaluation specialist. The initial instrument was sent to two of the NCAHE commissioners and the NCAHE Study Director for validation and verification of the modified recommendations (Appendix B). The Commission members whose opinions were solicited for authentication were the NCAHE Chairman and a Commissioner who is a member of the ADA Advisory Committee.

The NCAHE Chairman and the Commissioner approved the initial adaptation of the questionnaire; however, the Study Director contended that the questionnaire did not fully represent the extent and depth of the NCAHE's findings. She believed that with the omission of the corollaries, which suggested means of implementation of the recommendations, an essential part of the NCAHE study was neglected. In her judgment,

corollaries relevant to dietetics should be selected with modification as needed.

#### Final Instrument

The revised questionnaire was written to incorporate many of the corollaries recommended by the Commission. The fifteen primary recommendations were included in the questionnaire, along with selected corollaries (twenty-nine of the sixty-three NCAHE corollaries) deemed by the research committee to be most relevant for dietetics and dietetic education (refer to Table 13 in Appendix E for list of NCAHE corollaries included).

A copy of the revised questionnaire with the modified recommendations and related corollaries was sent to the NCAHE Chairman and Study Director for verification. They approved the final instrument and believed the questionnaire was more representative of the Commission's findings.

The final instrument consisted of two parts (Appendix C). In Part I, participants were asked to evaluate the fifteen NCAHE primary recommendations and twenty-nine related corollaries with respect to appropriate priorities for the dietetic profession and for dietetic education. Related corollaries were indented below their respective primary recommendations. Part II consisted of ten questions concerning demographic information to be used in analyzing responses and describing the sample. Additionally, instructions for completing the questionnaire were provided on the front page.

The two original scales were collapsed into a single five-point scale for assessment of the importance and timeliness of the

recommendations and corollaries for the dietetic profession and for dietetic education:

- (1) Essential recommendation for the dietetic profession and for dietetic education, urgent priority for implementation
- (2) Essential recommendation, but not an urgent priority for implementation
- (3) Important recommendation and somewhat urgent
- (4) Important recommendation, but not urgent
- (5) Recommendation is not of major importance for dietetics at this time.

The final questionnaire was printed on cream-colored paper in a tri-fold six-page format with the study sponsor indicated on the first page.

#### Distribution of the Instrument

The questionnaire, a prestamped return envelope, and a cover letter (Appendix D) briefly explaining the Report of the National Commission on Allied Health Education (NCAHE) and the intent of the study were mailed via first class to the participants. Informed consent information was included in the letter. Approximately three weeks later, a follow-up letter, questionnaire, and return envelope were mailed to the non-respondents.

All questionnaires had been coded with an identification number for follow-up purposes. All lists were cross-checked thoroughly to avoid duplication of mailings.

To personalize the mailing and encourage response, techniques known to increase participation were incorporated (103). Commemorative stamps were used, a handwritten signature was used on all cover letters, and the questionnaire was printed on colored paper. Letterhead stationery and envelopes bearing the symbol of the sponsoring institution were used.

Of the 607 instruments distributed, 437 were returned or 71.9 per cent. Eight questionnaires were incomplete; therefore, a total of 429 (70.6 per cent) were included in data analysis.

## RESULTS AND DISCUSSION

### The Survey Sample

The sample for the study was comprised of seven groups as shown in Table 1. The national governance group, state presidents, and house of delegates represented national and state leadership in the dietetic profession. The coordinated undergraduate program (CUP), dietetic internship, and dietetic technician directors constituted the educator component of the sample. The practitioners represented dietitians at the "grassroots" level.

### Geographic Distribution

Geographic distribution of the survey sample is presented in Table 2. The sample was categorized into seven geographic areas based on the respondent's state of residence. The seven geographic areas used in the analysis were those defined by ADA for the House of Delegates. Geographic areas represented states within defined regions of the United States and included the District of Columbia and Puerto Rico. The survey sample was distributed fairly evenly among the seven geographic areas; no one area represented the majority of respondents.

### Characteristics

The various characteristics of the groups in the survey sample are shown in Table 3. The highest level of education differed among the groups, although the majority of all groups had attained a master's degree. The percentage of state presidents and practitioners who had

Table 1: Groups in sample and number of respondents by group

group <sup>1</sup>	variation in N <sup>2</sup>
natl. gov. -- members of national governance groups and committees	55-59
state pres. -- presidents of state dietetic associations	37-39
house dele. -- members of House of Delegates	76-81
CUP dir. -- directors of coordinated undergraduate programs in dietetics	43-45
intern dir. -- directors of dietetic internship programs	41-46
DT dir. -- directors of dietetic technician programs	27-29
practitioners -- random sample of practicing dietitians, not in education or any of the groups above	116-121

<sup>1</sup>Groups selected from 1979-80 list of ADA officers, committees, boards and 1980 Directory of Programs (5).

<sup>2</sup>Refers to variation in number of each group who responded on ratings of recommendations.



Table 2: Geographic distribution of survey sample<sup>1</sup>

geographic area <sup>2</sup>	groups in sample							total
	natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners	
	%							
1	8.5	12.8	18.5	8.9	8.7	17.2	11.6	12.4
2	15.3	15.4	14.8	24.4	21.7	20.7	19.8	18.6
3	15.3	17.9	12.3	15.6	8.7	10.3	12.4	13.1
4	18.6	20.5	11.1	6.7	8.7	6.9	21.5	15.0
5	18.6	7.7	17.3	17.8	30.4	20.7	8.3	15.7
6	15.3	12.8	9.9	13.3	2.2	6.9	12.4	11.0
7	8.5	12.8	16.0	13.3	17.4	17.2	14.0	14.0

<sup>1</sup>Size and definitions of groups are in Table 1.

<sup>2</sup>Areas of the ADA House of Delegates:

- 1 -- AK, WA, OR, ID, MT, WY, CA, HI
- 2 -- ND, SD, MN, WI, MI, NB, IA, MO
- 3 -- SC, MS, LA, AL, GA, FL, PR, AR
- 4 -- CO, NV, UT, AZ, NM, OK, TX, KS
- 5 -- IL, IN, OH, WV, KY, TN
- 6 -- VA, MD, DC, DE, PA, NC
- 7 -- NY, NJ, CT, RI, MA, VT, NH, ME.

Table 3: Characteristics of groups in survey sample

characteristic	groups in sample <sup>1</sup>						
	natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners
%							
level of education							
bachelor's	10.2	33.3	14.8	--	2.2	3.4	34.7
graduate work, degree not complete	5.1	10.3	13.6	2.2	2.2	3.4	14.9
master's degree	45.8	43.6	58.0	40.0	71.0	69.0	38.8
doctoral work, degree not complete	13.6	7.7	6.2	15.6	8.9	13.8	7.4
doctorate	25.4	5.1	7.4	42.2	15.6	10.3	4.1
route to ADA membership							
dietetic internship	76.3	82.1	79.0	53.3	66.7	65.5	68.6
coordinated undergraduate program	1.7	--	2.5	--	--	3.4	2.5
combined dietetic internship-							
master's degree program	1.7	2.6	--	6.7	15.6	3.4	0.8
master's degree with experience or							
assistantship							
doctoral degree	15.3	12.8	7.4	20.0	17.8	20.7	14.9
dietetic traineeship	1.7	--	2.5	15.6	--	3.4	3.3
bachelor's degree with experience	--	2.6	--	2.2	--	--	5.0
	3.4	--	8.6	2.2	--	3.4	5.0

<sup>1</sup>Refer to Table 1 for size and definition of groups.

Table 3: (cont.)

characteristic	groups in sample					
	natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir. practi- tioners
length of ADA membership						
1 to 7 yrs.	6.8	15.4	2.5	15.6	17.8	37.9
8 to 12 yrs.	10.2	41.0	11.3	26.7	24.4	20.7
13 to 18 yrs.	11.9	15.4	28.8	8.9	17.8	11.6
19 to 24 yrs.	28.8	12.8	21.3	15.6	8.9	6.9
25 yrs. or more	42.3	15.4	36.3	33.4	31.1	17.2
years of dietetic practice						
1 to 6 yrs.	6.8	15.4	2.5	12.2	11.1	34.5
7 to 10 yrs.	8.5	30.8	6.2	22.0	22.2	24.1
11 to 15 yrs.	18.6	25.6	25.9	17.1	24.4	13.8
16 to 20 yrs.	18.6	15.4	29.6	12.2	11.1	10.3
21 to 28 yrs.	27.1	7.7	21.0	12.2	6.7	6.9
29 yrs. or more	20.3	5.1	14.8	24.4	24.4	10.3
current employment status						
full-time	94.9	82.1	82.5	100.0	95.6	93.1
part-time (< 30 hrs./week)	5.1	15.4	15.0	--	4.4	6.9
not employed	--	2.6	2.5	--	--	--
						2.5
						4.1

%

attained a master's degree was lower than was true in the other groups. Over 40 per cent of the CUP directors had received a doctorate; whereas, 25.4 per cent of the national governance had achieved this degree.

For all groups in the survey sample, the dominant route to membership in The American Dietetic Association (ADA) was through a dietetic internship. With the exception of the CUP directors, at least 65 per cent of each group in the sample listed the internship as the route to ADA membership. Among the CUP directors, over half (53.3 per cent) received their membership through the internship route; however, about one-third (35.6 per cent) became members of ADA through the master's degree with experience route or through the doctoral route. The master's degree with experience was a dominant route to membership in at least 15 per cent of the internship and dietetic technician director and practitioner groups. A small percentage of the sample had become ADA members through the dietetic traineeship route. Ninety-five per cent of the total survey group were registered dietitians.

Almost three-fourths of the members of the national governance group (71.1 per cent) and over half of the house of delegates (57.7 per cent) had been members of ADA nineteen years or longer. Additionally, 49 per cent of the CUP directors were long-term members of ADA. The majority of the state presidents, dietetic technician directors, and practitioners had been members of ADA for 12 years or less, while 42 per cent of both CUP and internship directors were in this category.

Almost three fourths of the state presidents (71.6 per cent) and over half of the CUP directors (51.3 per cent) and intern directors (57.7 per cent) had fifteen years or less of dietetic practice; whereas, a majority of the dietetic technician directors (58.6 per cent) and

dietetic practitioners (52.1 per cent) had been in practice for 10 years or less. About two-thirds of the national governance (66 per cent) and house of delegates (65.4 per cent) had been practicing dietetics for 16 years or longer.

The majority of all groups were employed full time at the time of the survey. Approximately 15 per cent of both the state presidents and house of delegates, however, were employed part time; less than 3 per cent of these groups were not employed.

#### Employment Status

The employment status and employer of the groups in the survey sample are shown in Table 4. The CUP, internship, and dietetic technician directors were excluded from this table, except those in national or state leadership, because their position title explained their employment status. Of the remaining four groups, the largest percentage were directors. Directors comprised 27.1 per cent of the national governance group, 23.7 per cent of the state presidents, 20.3 per cent of the house of delegates, and 17.1 per cent of the practitioners. A number of the national governance (15.3 per cent), state presidents (21.1 per cent), and house of delegates (12.7 per cent) listed their position title as university faculty. More practitioners were clinical staff dietitians (10.3 per cent) and generalists (10.3 per cent) than in the other groups. Public health was listed as a position title by 15.2 per cent of the house of delegates and by 12.8 per cent of the practitioners. The remainder of the group was distributed among several other types of positions.

Hospitals were listed as the primary employer for 42.1 per cent of the state presidents, 37.1 per cent of the house of delegates, and 44.8

Table 4: Present employment status of groups in survey sample

position title	groups in sample <sup>1</sup>			
	natl. gov.	state pres.	house dele.	practi- tioners
	%			
director	27.1	23.7	20.3	17.1
assoc. dir.--admin.	3.4	2.6	5.1	5.1
assoc. dir.--clinical	--	7.9	6.3	8.5
admin. staff diet.	1.7	--	--	0.9
clinical staff diet.	1.7	5.3	1.3	10.3
generalist	--	2.6	5.1	10.3
internship dir.	8.5	5.3	2.5	--
CUP director	10.2	2.6	2.5	4.3
univ. faculty	15.3	21.1	12.7	9.4
private practice/consultant	8.5	7.9	7.6	2.6
public health	3.4	2.6	15.2	12.8
other	15.3	10.5	12.7	12.0
two or more combinations	5.1	7.9	8.9	6.8
<hr/>				
employer				
hospital or other health care facility	23.7	42.1	37.1	44.8
university	39.0	23.7	16.7	13.8
govt. agency	18.6	13.2	25.6	24.1
other	15.3	13.1	16.6	9.5
two or more employers	3.4	7.9	3.8	7.8

<sup>1</sup>Groups other than educators except for those educators in one of the first three groups; refer to Table 1 for size and definition of groups.

per cent of the practitioners. Thirty-nine per cent of the members of the national governance listed the university as the primary employer, while 23.7 per cent indicated hospitals were the main employer. Government agencies employed about one-fourth of the house of delegates (25.6 per cent) and practitioners (24.1 per cent).

### Professional Involvement

Table 5 shows the professional involvement in ADA of the groups in the survey sample at district, state, and national levels. A majority of each of the groups, except the practitioners, had served on district committees. The members of the house of delegates reported the greatest involvement on district committees; almost 60 per cent (56.8 per cent) had listed six or more years of service at this level. The percentage of dietitians participating in district committees could be due to the fact that in many states district committees are non existent. A majority of the national governance, state presidents, the house of delegates, and the CUP and internship directors had served on state committees, while about two-thirds of the DT directors and practitioners had no such service.

In five of the seven groups (state presidents, practitioners, and CUP, internship, and dietetic technician directors) between half and three-fourths had not held district office; however, a majority of the respondents in both the national governance and house of delegates had held a district office position for one year or longer. Between 50 and 80 per cent of the CUP, internship, and dietetic technician directors and practitioners had not served in office at the state level. Of the three remaining groups, almost half (49.4 per cent) of the house of delegates had served seven or more years in state offices, while over

Table 5: Professional involvement in ADA at district, state, and national levels of groups in survey sample							
years of professional service in ADA	groups in sample <sup>1</sup>						
	natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners
district committees							
none	27.1	46.2	29.6	33.3	43.5	34.5	54.5
1 to 5 yrs.	30.5	30.8	13.6	44.4	28.3	48.3	30.6
6 to 10 yrs.	16.9	17.9	24.7	8.9	17.4	6.9	5.0
11 yrs. or more	25.4	5.1	32.1	13.3	10.9	10.3	9.9
state committees							
none	15.3	12.8	14.8	37.8	32.6	69.0	61.2
1 to 5 yrs.	27.1	35.9	23.5	35.6	52.2	24.1	29.8
6 to 10 yrs.	30.5	43.6	29.6	17.8	8.7	3.4	5.0
11 yrs. or more	27.1	7.7	32.1	8.9	6.5	3.4	4.1
district offices							
none	35.6	51.3	32.1	57.8	56.5	72.4	71.1
1 to 5 yrs.	37.3	46.2	38.3	33.3	34.8	24.1	19.8
6 yrs. or more	27.1	2.6	29.6	8.9	8.7	3.4	9.1

<sup>1</sup>Refer to Table 1 for size and definition of groups.



Table 5: (cont.)

years of professional service in ADA	groups in sample						practi- tioners
	natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	
state offices							
none	30.5	--	--	51.1	56.5	79.3	79.3
1 to 3 yrs.	11.9	33.3	8.6	28.9	26.1	10.3	11.6
4 to 6 yrs.	25.4	53.8	33.3	11.1	10.9	6.9	5.8
7 yrs. or more	32.2	2.6	49.4	8.9	6.5	3.4	3.3
length of time not designated	--	10.3	8.6	--	--	--	--
national committees							
none	10.2	76.9	53.1	51.1	58.7	86.2	94.2
1 to 3 yrs.	40.7	20.5	28.4	31.1	21.7	3.4	3.3
4 yrs. or more	49.2	2.6	18.5	17.8	19.6	10.3	2.5
national offices							
none	45.8	100.0	87.7	91.1	95.7	96.6	99.2
1 yr. or more	54.2	--	12.3	8.9	4.3	3.4	0.8

half of the national governance and state presidents had held state offices at least four years.

With the exception of the national governance, the majority of the members of the remaining six groups had not served on national committees nor had they held national office. Almost 90 per cent of the national governance, however, had been involved in national committees and 54.2 per cent had been elected to national offices.

#### Essentiality and Urgency of NCAHE Recommendations for Dietetics and Dietetic Education

The fifteen primary recommendations and twenty-nine of the sixty-three corollary recommendations proposed by the NCAHE were modified slightly by the research committee for relevance to dietetics and dietetic education. The revised recommendations and corollaries were verified and approved by the NCAHE Study Director, Chairman, and one of the commissioners. In the instrument, a five point scale was used by the respondents to assess essentiality and urgency of the recommendations and selected corollaries for the dietetic profession and dietetic education. The recommendations were evaluated by national and state leadership, educators, and practitioners (groups are defined in Table 1).

In Table 6, the relative ordering of the primary recommendations and corollaries is shown, based on responses of the survey sample, from those rated as most essential and urgent to those considered least essential. Essentiality and urgency ratings were based on the percentage of the total group indicating the recommendations were essential and urgent.

A group mean percentage was computed by averaging the percentages of essential and urgent responses of each of the seven groups in the

Table 6: Essentiality and urgency of NCAHE<sup>1</sup> recommendations for the dietetic profession and dietetic education

recommendation	percentage of essential, urgent responses <sup>2</sup>	
	group mean <sup>3</sup>	weighted mean <sup>4</sup>
	%	%
<u>most essential and urgent (&gt; 60%):</u>		
15. ADA should increase legislative activities and public policy efforts to convince federal, state, and local governments and private resources to provide adequate support for allied health education and manpower.	69	66
12.2. As a criterion for establishing and continuing programs, educational institutions must assure that adequate clinical affiliations are available, that students receive appropriate clinical practicum, and that sufficient funds to continue a new program through at least two completing classes are available.	67	69
2. Education should be linked to practice through role delineations (i.e., through collaboration of practitioners and educators, roles and functions of dietitians and other members of the dietetic team should be defined, and competencies identified and translated into educational content).	67	66

<sup>1</sup>NCAHE = National Commission on Allied Health Education.

<sup>2</sup>% of respondents indicating recommendation was essential and had urgent priority for implementation.

<sup>3</sup>Group mean percentage computed by averaging %'s of each of seven sample groups. Refer to Table 1 for definition of groups and N's.

<sup>4</sup>Refers to mean percentage computed by weighting group % by size of each sample group.

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
3. Dietetic education should prepare students who can meet standard performance objectives (competencies), and adapt to changing health service needs; flexibility in the methods of educational preparation should be encouraged.	66	64
<u>moderately essential and urgent (50-59%):</u>		
4. To meet new service demands, all dietetic education programs should include the study of: (a) human values, (b) illness prevention and health promotion methods, and (c) delivery systems, including roles and functions of health personnel, patients' rights, legal risks, cost effectiveness, and quality control.	59	60
9. The development of leadership in the clinical, managerial, and educational areas should be a priority for dietetic education.	55	55
12.1. Before establishing new programs in dietetic education, institutions should be encouraged to cooperate with existing programs.	51	52
9.5. Educational institutions, professional organizations, employers, and others should initiate, provide, and/or support programs of continuing education to teach planning and management skills to dietetic personnel already in practice.	50	52

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
<u>somewhat essential and urgent (40-49%)</u>		
7.2. Educational institutions and clinical facilities should collaborate, or reevaluate current collaborative arrangements, to increase integration and improvement of clinical and didactic instruction through procedures such as: mechanisms to permit academic faculty to remain clinically current, and organized joint planning for the overall curriculum by clinical and academic faculty.	49	49
2.1. ADA should consult with other allied health professions which have conducted role delineation studies and seek funds for role delineation studies of its own (i.e., beyond current efforts).	46	42
7. Clinical and didactic education should be better integrated, and the range and types of clinical education sites and methods should be expanded to meet new health service demands.	46	46
9.3. Qualified universities and health service organizations should conduct carefully controlled studies of the effect of clinicians on the cost and effectiveness of nutritional care services.	45	45
9.6a. Programs to prepare dietetic education faculty should include advanced study in a subject matter area in dietetics.	45	44
13.1. ADA should assume a leadership role in delineating career options in dietetics and in identifying ways of facilitating career advancement and change.	45	46

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
13.2. The Commission on Accreditation of The American Dietetic Association should examine their policies to determine if and how they may obstruct articulation between levels in the dietetic profession and between disciplines.	44	42
12.3. For maximum use of existing institutional resources, dietetic or allied health students should receive instruction in the basic sciences through participation in general university courses rather than in special courses offered exclusively for dietetic and/or allied health majors.	43	45
7.4. Dietetic education programs should use a broad array of clinical patterns and sites to enhance both the clinical practicum and future job placement of graduates.	41	39
7.1. Educational institutions, which offer the didactic portion of a dietetic education program, should be responsible for the total education to ensure better integration of didactic and clinical education and sufficient breadth of clinical experiences however; they must share the responsibility for planning, implementation, and evaluation with their clinical affiliates.	40	39

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
<u>not as essential or urgent (30-39%):</u>		
13. Education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress (i.e., use of equivalency examinations for identifying objectives already attained, modularization of courses with waiver of portions that duplicate learned material, a more workable system for transfer of credits between institutions, etc.).	39	38
9.6c. Programs to prepare dietetic education faculty should include health care delivery and interdisciplinary processes.	38	41
1. Alliance in service and education should be strengthened, based on an appreciation of the interdependence of all health occupations and an understanding of their roles, functions, and special contributions.	38	39
12. The establishment, expansion, and termination of dietetic education programs should be based on manpower requirements, adequacy and efficient use of available resources, and collaboration within and among educational and other institutions.	38	39
5. In the future, new health service needs should be met, where possible, without establishing new occupations and programs; unnecessary expansion of entry-level requirements should be controlled (e.g., M.S. required for dietetic practice).	38	38
9.4. Both clinical and academic faculty should increase their efforts to test the clinical theories they teach.	37	39

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
6. The importance of continuing education should be recognized and networks should be established to ensure collaboration and information sharing on continuing education matters.	35	37
5.1. Accreditation of dietetic education programs should be linked to justification of the level and length of programs based on competencies needed and utilized in the delivery of services.	35	34
5.3. Research to improve the methodology of performance-based testing should be supported.	34	30
8.1. Intensive research on methods of clinical education should be conducted, to include studies on: (a) identifying the types of professional learning which are most dependent on practical experiences, (b) validating or modifying existing standards for the amount and type of clinical experience required for program accreditation and/or practitioner certification, and (c) determining the relative cost-effectiveness of different patterns of clinical education.	33	31
10.1. Administrators of dietetic education programs should regard scholarly activity as a necessary part of the total activities of faculty and take this into account in determining faculty needs, budgeting, selection, and promotion of faculty.	32	30



Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
9.6b. Programs to prepare dietetic education faculty should include preparation in professional education, including history and philosophy of higher education, instructional methods, and curriculum development and planning	31	30
13.4. Dietetic education programs, with the advice and counsel of professional associations and practitioners, should evaluate student selection procedures to determine whether more reliable indicators of probable academic success can be found and utilized.	31	29
14. Information relating to administration and planning in dietetic education should be collected and shared systematically.	30	30
8. Research in clinical education methods and theory must be greatly expanded.	30	29
<u>least essential and urgent (&lt; 30%):</u>		
7.3. Formal degree programs as well as continuing education programs should be designed specifically to prepare faculty to plan, supervise, and evaluate clinical practice.	29	29
9.1. ADA should encourage qualified universities to develop advanced programs for preparation of master clinicians which emphasize advanced clinical theory, methods of clinical research, and an advanced practicum.	28	28
9.2. Any process of credentialing master clinicians should focus on the competencies essential for practice and recognize that they may be gained through academic preparation and/or on-the-job experience.	27	29

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
7.5. Various methods of learning for clinical competence should be developed in sites other than patient health service facilities. These may include simulated clinical learning programs, programmed laboratory experiences, and other patient/client service areas.	26	24
5.2. ADA should support the premise that registration and reregistration should be based on validated role delineations and definitions.	25	23
13.3. Directors of dietetic programs should establish links with local secondary school systems to inform students about dietetic careers and requirements of educational programs and to encourage participation in work experiences in health settings during the high school years.	24	23
6.1. ADA should participate in a National Coalition for Continuing Education for the provision of leadership and services at national, regional, and local levels. The function of the Coalition should include:		
(a) collective development of guidelines and principles for continuing education activities;		
(b) support services and technical assistance for establishing and publicizing local and regional interdisciplinary continuing education networks;		
(c) a clearinghouse for research on continuing education; and		
(d) information services to practitioners.	23	24

Table 6: (cont.)

recommendation	percentage of essential, urgent responses	
	group mean	weighted mean
	%	%
10. Support for research in dietetic education should be substantially increased, and dietetic faculty should be encouraged to strengthen their commitment to research.	23	23
3.1. To assure flexibility, students in dietetic education programs should be allowed significant opportunities for selection of courses in humanities, social sciences, and natural sciences, in keeping with the students' individual talents and interests for personal enrichment.	19	20
11. Dietetic education programs should strengthen their efforts to increase the representation of minorities in leadership positions.	14	14
13.5. Recruitment efforts to increase minority representation in dietetic education programs should be strengthened.	14	13

sample. The weighted mean percentage was calculated by multiplying each sample group's percentage of essential and urgent responses by the number of respondents in that group and dividing the sums of all groups by the total sample size. The weighted mean was computed to ensure that the individual's opinion within the group also would be considered. The group percentages for mean essentiality and urgency of the NCAHE recommendations and corollaries were analyzed and categorized as follows: most essential and urgent ( $\geq 60\%$ ), moderately essential and urgent (50-59%), somewhat essential and urgent (40-49%), not as essential and urgent (30-39%), or least essential and urgent ( $< 30\%$ ). Detailed distributions of ratings are shown in Tables 14 and 15 in Appendix E.

#### Most Essential and Urgent ( $\geq 60\%$ )

Three primary recommendations and one corollary were rated as "most essential and urgent." Recommendation 15 regarding increased ADA legislative activities for support of allied health education and manpower was rated by the survey groups as the "most essential and urgent" recommendation. The group mean percentage of essential and urgent responses was 69 per cent.

The National Commission on Allied Health Education underscored (3) the importance of federal support in the implementation of many of the NCAHE recommendations. They believed that the funding of allied health education has been inadequate in the past and must be strengthened in the future. Additionally, the NCAHE recommended that the federal government, educational institutions, and professional associations work together toward securing adequate and continuous funding for allied health education and services.

In November 1979, five special task forces were formed by the president of the American Society of Allied Health Professions (ASAHP). The task forces were charged with examining aspects of the final NCAHE report and developing recommendations for follow-up by ASAHP and member organizations and institutions (104).

The Task Force on Funding believed (105) that ASAHP should be the synthesizer of ideas and generator of funding proposals and should act as a lobbyist for principles, policies, legislation, and funding for allied health programs. The Task Force further stated that ASAHP should assume a leadership role in the formation and strengthening of alliances between educational institutions, professional organizations, and ASAHP state chapters. The committee believed that the coalition could serve as an advocate in promoting allied health visibility and funding. Additionally, the Task Force recommended that ASAHP should implement a national campaign to make government at all levels aware of the allied health professions and the need for increased funding.

Also identified as "most essential and urgent" was corollary 12.2 dealing with the establishment and continuation of programs based on the availability of clinical affiliations, funds, and adequacy of clinical practicum. Primary recommendation 12, from which the corollary emanated, was listed, however, in the "not as essential or urgent" category (40-49 per cent group mean). According to recommendation 12, manpower requirements, adequacy of resources, and effective collaboration should be considered in establishment and termination of programs.

Two other corollaries of recommendation 12 were rated by the groups as "moderately essential and urgent" (corollary 12.1), and "somewhat essential and urgent" (corollary 12.3). Corollary 12.1 concerned

cooperation with institutions with existing programs before establishing new programs. Corollary 12.3 dealt with the issue that dietetic students should receive instruction in basic sciences through participation in general university courses.

The NCAHE underscored (3) the importance of responsible decision making by leaders in planning and administration of allied health programs. According to the NCAHE, programs should be established and maintained (a) as a reflection of manpower requirements, (b) with assurance of adequate institutional resources, and (c) with the best use of existing resources through collaboration and sharing.

The ASAHP's Task Force on Planning and Administering Education Programs addressed (106) recommendation 12 in their study. The Task Force believed that ASAHP could be used as the medium through which the concerns of establishment, expansion, and termination of programs be made known to the U.S. Office of Education and accrediting agencies. They further emphasized the importance of collaborative efforts rather than unilateral action by any one interest group as a criterion in establishing programs.

Primary recommendation 2, which called for linking education to practice through role delineation, had a group mean of 67 per cent. Corollary 2.1, the recommendation that ADA should conduct role delineation studies beyond current efforts, was rated "somewhat essential and urgent" (group mean of 46 per cent).

The NCAHE believed (3) that role delineation studies allow standardization of educational objectives by linking them to practice needs. Additionally, they purported that role delineation studies are a first step in determining commonalities in practice and educational needs of

various allied health occupations. They contended that results of role delineation studies could be used to develop a knowledge base generic to many allied health occupations, to plan more effectively for interdisciplinary education, and to implement multicompetency programs that are based on demonstrated commonalities.

The ASAHP's Task Force on Role Delineation believed (107) that ASAHP should take the lead in developing a state of the art repository and manual on role delineation. The Task Force asserted that the results of a state of the art study on role delineation would have implications for competency assurance programs. Additionally, results could be disseminated to other organizations involved and interested in such studies.

The ASAHP's Task Force on Research also acknowledged (108) the importance of conducting role delineation studies. They foresaw the issue of role delineation as underlying many of the other NCAHE recommendations and believed that data regarding these studies were necessary before other NCAHE recommendations could be implemented.

In October 1979, the project staff of the ADA Role Delineation Study and professional committees began work on the delineation of currently existing role and responsibilities of entry-level clinical dietetic personnel. The study was sponsored by the Division of Associated Health Professions (DAHP), Bureau of Health Professions. A panel of clinical dietetic practitioners, educators, and employers of clinical dietetics practitioners delineated the "actual" role, which identified responsibilities in the role of clinical dietetics/nutrition care as they currently exist in the field. Additionally, the level of dietetic competence presently expected for the performance of professional or technical responsibilities was identified (109).

In the fall of 1980, the identification of the "appropriate" role of clinical dietetics was expected to be completed. Nationwide survey data gathered from registered dietitians, dietetic technicians and assistants, physicians, nurses, and health care facility administrators revealed the responsibilities each group believed entry level clinical dietetic personnel should be competent to perform. Responsibility statements were accepted or modified based on the Working Committee's consideration and the opinion of dietetic and other health professionals. A total of seventy-seven competency statements corresponding to each responsibility were identified by the Committee members. The methodology also included ranking competency statements to determine the relative importance of each competency association with each responsibility at each practice level of the appropriate role (109).

The last recommendation rated "most essential and urgent" by the survey groups was recommendation 3, which was concerned with flexibility in dietetic education and preparation of students who are competent and adaptable. The related corollary 3.1, the recommendation that dietetic education programs should include significant liberal general education, was rated much lower (19 per cent group mean) than its primary recommendation.

The NCAHE contended (3) that the basic occupational preparation program should be viewed as a foundation for continued learning and development so that graduates do not find themselves with obsolete skills and without the background to develop new skills. They believed that adaptability of allied health students and flexibility in programs could be achieved in several ways: (a) by acquiring a knowledge base generic to health occupations, on which the knowledge and skills of several



specialties could be built; (b) by learning the competencies required to perform in more than one occupational role; and (c) by developing broadly based scientific and analytical capabilities through study in the arts and sciences.

#### Moderately Essential and Urgent (50-59%)

Two recommendations and two corollaries were rated as "moderately essential and urgent"; group means were between 50 and 59 per cent. One corollary, 12.1, was discussed in conjunction with primary recommendation 12 in the preceding section. Recommendation 4 was concerned with the inclusion of human values, illness prevention, and delivery systems in dietetic education programs.

NCAHE believed (3) that trends in health service and changing health priorities have necessitated the incorporation of these subject areas, which are health related but not occupationally specific, into allied health curricula. NCAHE asserted that educational programs should prepare students to enter the work environment with some regard of their roles and responsibilities in relation to other health personnel, patients, and employers.

Recommendation 9 and corollary 9.5 also were rated as "moderately essential and urgent" by the groups. According to recommendation 9, the development of leadership in the clinical, managerial, and educational areas should be a priority for dietetic education. Corollary 9.5 was concerned with the provision of continuing education programs by educational institutions and others for the purpose of teaching management skills to practitioners.

Two other corollaries related to primary recommendation 9 were listed in the "somewhat essential and urgent" category (40-49 per cent

group mean). Corollary 9.3 dealt with studies by qualified universities and health service organizations of the effects of clinicians on the cost and effectiveness of nutritional care services. Corollary 9.6a was related to programs for preparation of dietetic education faculty and the inclusion of advanced study in a subject matter area in dietetics.

Corollaries 9.4, 9.6b, and 9.6c were rated by the participants as "not as essential and urgent" (group mean percentage 30 to 39 per cent). According to corollary 9.6c, programs to prepare dietetic education faculty should include health care delivery and interdisciplinary processes. Corollary 9.6b dealt with the premise that programs to prepare dietetic education faculty should include preparation in professional education, including history and philosophy of higher education, instructional methods, and curriculum development and planning. Corollary 9.4 called for increased efforts by both clinical and academic faculty to test the clinical theories they teach.

Two other corollaries related to the ninth recommendation were listed in the "least essential and urgent" category (i.e., less than 30 per cent rated the recommendations as "essential and urgent"). Corollary 9.1 related to ADA's encouragement of qualified universities to develop advanced programs for preparation of master clinicians. Corollary 9.2 linked the process of credentialing master clinicians with attention to the competencies essential for practice.

According to the NCAHE report (3), curriculum design for basic occupational preparation can accommodate only a small portion of all the theory and skills that might be useful to clinicians in the field. They contended, however, that allied health clinicians desiring to have specialized knowledge in their field and to become master clinicians

should have available the necessary formal mechanisms to achieve their goals.

The Commission further declared (3) a need for increased effort to prepare persons in allied health occupations as effective health service planners and managers working in health service and community agencies, professional organizations, and academic institutions. The Commission believed that more allied health practitioners need skills to assume a more active role in the planning and management of their services.

The ASAHP Task Force charged with studying the issue of allied health leadership recommended (110) that the Society place high priority on the development of leadership in clinical, managerial, and educational areas. A further recommendation was that ASAHP seek funds to conduct regional leadership institutes. The Task Force believed the institutes should accommodate rural areas and have provisions for inclusion of minorities and women. The Task Force contended (110) that the development of strong clinical leadership at the master's level was crucially important to allied health and recommended that ASAHP and other allied health professional organizations support federal legislation which would provide funding for programs that prepare advanced level discipline specialists.

As an additional recommendation, the Task Force suggested (110) that the Bureau of Health Manpower fund short-term continuing education programs on planning and management skills for clinical personnel. The Task Force concluded its report by recommending that ASAHP develop a "Master Plan" whereby the recommendations of the Commission's report could be implemented at regional field stations.

### Somewhat Essential and Urgent (40-49%)

One primary recommendation and nine corollaries were listed in the "somewhat essential and urgent" category. Four of the corollaries which were associated with primary recommendations 2, 9, and 12 were discussed in previous sections.

Recommendation 7 and three related corollaries, 7.1, 7.2, and 7.4 were rated "somewhat essential and urgent." Of these four, corollary 7.2 received the highest rating. This corollary related to the collaboration between educational institutions and clinical facilities for the purpose of integration and improvement of clinical and didactic instruction. Recommendation 7 was concerned with the integration of clinical and didactic education and the expansion of the range and types of clinical education sites and methods to meet new health service demands. Corollary 7.4 related to broadening the array of dietetic education programs, clinical patterns, and sites to enhance both the clinical practicum and future job placement of graduates. Corollary 7.1 focused on the responsibility of educational institutions for dietetic education with planning, implementation, and evaluation responsibilities shared with clinical affiliates.

The other two corollaries related to primary recommendation 7 (corollaries 7.3 and 7.5) were rated by the respondents as among the "least essential and urgent" NCAHE recommendations. In corollary 7.3, design of formal degree and continuing education programs to prepare faculty for planning, supervising, and evaluating clinical practice was encouraged. According to corollary 7.5, various methods of learning for clinical competence should be developed in sites other than patient health service facilities.

The National Commission on Allied Health Education believed (3) that integration of didactic and clinical education must be achieved at three levels for maximum impact: administrative level, curriculum level, and course level. The Commission stated that continuity and articulation between clinical and didactic experiences is dependent upon an understanding of who is responsible for planning, content, and administration of clinical education. The Commission also believed (3) that optimum sequencing of clinical and didactic experiences can be achieved in individual programs by ensuring that educators have a clear understanding of the goals and processes of both components and of the need to integrate the components.

The ASAHP Task Force on Planning and Administering Educational Programs which studied primary recommendation 7 recommended (106) that national or regional workshops be held to develop didactic-clinical relationships and promote NCAHE recommendations in this area. Additionally, the Task Force suggested that information regarding exemplary models be available centrally through ASAHP. Furthermore, the Task Force suggested that professional organizations, educational institutions, and ASAHP cooperate to conduct training institutes in didactic-clinical relationships (3).

Both corollaries 13.1 and 13.2 were considered "somewhat essential and urgent" by the survey groups. Corollary 13.1 was related to ADA's leadership role in delineating career options in dietetics and in identifying ways of facilitating career advancement and change. Corollary 13.2 focused on the examination of articulation policies by the ADA Commission on Accreditation. Primary recommendation 13, however, was rated as "not as essential or urgent." According to this

recommendation, education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress. Corollary 13.4, the recommendation that dietetic education programs evaluate student selection procedures to identify more reliable indicators of academic success, was classified as "not as essential or urgent."

The other two corollaries related to primary recommendation 13, corollaries 13.3 and 13.5, were regarded by the respondents as "least essential and urgent." Corollary 13.3 called for the linking of dietetic programs directors with local secondary school systems to inform students about dietetic careers. Interestingly, Stone et al. reported (111) that job experience had a degree of influence on career selection in dietetics.

Corollary 13.5 was concerned with the strengthening of recruitment efforts to increase minority representation in dietetic education programs. This corollary was the lowest ranked of all the NCAHE recommendations and corollaries in the survey.

The NCAHE contended (3) that in a rapidly changing health industry mechanisms to facilitate career changes are necessary for optimal flexibility of the health workforce. The Commission believed that redirecting the talents of existing practitioners from obsolete or low-demand services to new or high-demand services is cost-effective.

The NCAHE also maintained (3) that providing maximum opportunity for student development could be attained by removing arbitrary barriers in the educational system that impede articulation and transfer of credit and by providing recognition for learning that already has taken place. They believed, however, that many allied health programs continue to be

rigid and do not permit exemption of students from certain courses, despite demonstrated competency in their areas.

The ASAHP Task Force on Planning and Administering Educational Programs examined (106) primary recommendation 13 and recommended that national or regional workshops on articulation, student selection, and minority student recruitment should be coordinated through ASAHP. The Task Force further recommended that an ASAHP clearinghouse for such information be established.

The Task Force maintained (106) that consortia of colleges, universities, and affiliation sites should attempt to develop articulation linkages, conduct follow-up studies of graduates, and develop model recruitment and retention projects for disadvantaged students. The group further recommended that professional organizations review program lengths according to curriculum needs and that standards be developed which promote articulation and career mobility. The Task Force concluded with the suggestion that state level advisory committees provide information about allied health programs and careers to schools, students, and employers.

#### Not as Essential and Urgent (30-39%)

Seven primary recommendations and eight corollaries were listed in the "not as essential and urgent" category. Recommendations 13, 12, and corollaries 9.4, 9.6b, 9.6c, and 13.4 have been examined in other sections because related recommendations were rated in one of the categories with greater priority.

Primary recommendation 1, the premise that alliance in service and education should be strengthened based on an appreciation of the



interdependence of all health occupations and an understanding of their roles, functions, and special contributions, was considered to be among the "not as essential or urgent" recommendations. The group mean percentage of "essential and urgent" responses was 38 per cent.

The NCAHE asserted (3) that alliances must be built and strengthened between education and services, between allied health and other occupations, and within allied health services and education. The Commission maintained that collaboration and sharing of resources is vital to the promotion of these alliances.

Recommendation 5, rated similarly to primary recommendation 1, was concerned with controlling the expansion of new occupations, programs, and entry level requirements. Corollaries 5.1 and 5.3 with group means of 35 and 34 per cent, respectively, also were listed in the "not as essential or urgent" category. The contention that accreditation of dietetic education programs should be linked to justification of the level and length of programs, based on competencies needed in dietetic services, and the need for research to improve the methodology of performance-based testing were evaluated in these corollaries.

Another corollary related to primary recommendation 5, corollary 5.2, fell in the "least essential and urgent" category. Validated role delineations and definitions as the basis for registration and reregistration was the assertion in corollary 5.2.

NCAHE described (3) the unnecessary proliferation of basic occupational programs for new health specialties as wasteful. They contended that this results in splintering of health service functions which impairs the quality and increases the costs of health service delivery. The NCAHE stated that as an alternative to establishing new programs,



new health service needs can be met by providing supplemental preparation to existing health personnel or incorporating new objectives in existing educational programs.

In discussing the issue of controlling entry level requirements, the ASAHP Task Force on Role Delineation underscored (107) the importance of first establishing role delineations to determine performance needs and job competencies. By ascertaining competencies, they believed entry level requirements could be assessed more accurately.

Recommendation 6 also was listed in the "not as essential and urgent" category. This primary recommendation was concerned with recognition of the importance of continuing education and the need to establish networks to ensure collaboration and information sharing on continuing education matters. The suggestion in the related corollary 6.1 that ADA participate in a National Coalition for Continuing Education for the provision of leadership and services at all levels was rated in the "least essential and urgent" category.

The NCAHE contended (3) that greater emphasis should be placed on the role of continuing and advanced education to meet expanding subspecialty needs without increasing the content or length of educational programs for entry level practice. In addressing this issue, the ASAHP's Task Force on Planning and Administering educational programs suggested (106) that the Society convene a meeting to establish a National Coalition for Continuing Education.

Recommendation 8 and corollary 8.1 also were listed in the "not as essential or urgent" category. Expansion of research in clinical education methods and theory was supported as essential and urgent by a mean percentage of 30 per cent of the survey respondents. A slightly higher

percentage (33 per cent) supported research on methods of clinical education (corollary 8.1).

The NCAHE believed (3) that the clinical practicum is a vital component of professional preparation. In studying the clinical practicum, however, NCAHE found that little research has been conducted concerning what learning can be accomplished best in a practicum situation or the amount of clinical experience necessary for a study to attain minimum competence for safe and effective practice. The NCAHE identified other areas that required further research: the determination of sites that are needed for most relevant clinical experience and the identification of the most effective and/or cost efficient patterns of clinical education.

The ASAHP's Task Force on Research was charged (108) to select the areas of research they believed warranted immediate attention. The two areas identified were cost effectiveness/efficiency and role delineation and commonalities. The Task Force urged colleges, universities, and health service organizations to conduct controlled studies on the cost and effectiveness of allied health services. In addition, the Task Force asserted that issues pertaining to cost effective patterns of clinical education and development of valid methods of assessing the cost of clinical education should be addressed.

Almost one-third of the survey groups (32 per cent) maintained that administrators of dietetic education programs should assess scholarly activity in determining faculty and fiscal needs (corollary 10.1). The related primary recommendation 10, however, was categorized as "least essential and urgent." This recommendation was concerned with the need

to increase support for research in dietetic education and to strengthen commitment to research among dietetic faculty.

The NCAHE argued (3) that the need for research relating to allied health education and services is critical. They cited the following topics as particularly in need of study: cost effectiveness of educational processes, faculty characteristics, impact of institutional environments and program characteristics on students, and relationship of education to service needs.

Primary recommendation 14 which was concerned with the need for systematic collection and dissemination of information relating to administration and planning in dietetic education was regarded by the respondents as "not as essential and urgent." The ASAHP's Task Force on Planning and Administering educational programs recommended (106) that ASAHP attempt to secure funds to establish a clearinghouse for national use. Data such as manpower inventories, education programs, needs assessments, and literature would be compiled and disseminated in the proposed national center.

#### Least Essential and Urgent (< 30%)

The "least essential and urgent" category was comprised of two primary and nine corollary recommendations. All but primary recommendation 11 have been discussed previously along with discussion of related recommendations which were rated as more essential and urgent than those in this category. The need to strengthen representation of minorities in leadership positions was the primary recommendation which received the least support (recommendation 11).

Although women represent the overwhelming majority in leadership positions in the dietetic profession, women and other minorities are

underrepresented greatly in leadership positions in many allied health occupations. The Task Force on Allied Health Leadership contended (110) that women and minority group members should be recruited for participation in leadership development programs and basic professional preparatory programs. The Task Force recommended establishing an ASAHP trainee program to attract women and minority group members who desire to serve in leadership positions.

### Priorities for Implementation

Relative priorities for implementation of the NCAHE primary recommendations and corollaries are listed in Table 7. The recommendations are listed in decreasing order of priority based on group mean percentage ratings of recommendations as either essential and urgent priorities for implementation or as important and somewhat urgent. The percentages shown in the table were computed by summing group mean percentages to the two response categories. Based on group priority mean, the recommendations and corollaries were categorized as follows:

- urgent ( $\geq$  70 per cent group mean)
- moderately urgent (60-69 per cent)
- somewhat urgent (50-59 per cent)
- least urgent ( $<$  50 per cent)

Also shown in Table 7 are the NCAHE recommendations rated on the basis of essentiality to the dietetic profession and dietetic education. Essentiality was determined by summing the sample groups' mean percentage responses to recommendations as either essential and urgent priorities for implementation or as essential, but not urgent.

Table 7: Priorities for implementation of NCAHE recommendations in the dietetic profession and dietetic education

recommendation <sup>1</sup>	priority recommendations <sup>2</sup>		essential recommendations <sup>3</sup>	
	group mean <sup>4</sup>	weighted mean	group mean	weighted mean
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Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
	%			
4. Programs should include the study of human values, illness prevention, and health delivery systems.	73	74	82	82
9. Development of leadership should be a priority for dietetic education.	72	73	77	77
9.5. Educational institutions and others should provide continuing education programs to teach planning and management skills to practitioners.	72	72	72	74
<u>moderately urgent (60-69%):</u>				
12.1. Before establishing new programs in dietetic education, institutions should cooperate with existing programs.	69	69	71	71
9.3. Studies of the effect of clinicians on the cost and effectiveness of nutritional care services should be conducted.	66	66	69	67
7. Clinical and didactic education should be better integrated; sites and methods of clinical education should be expanded.	65	65	73	74
13.2. The ADA accreditation commission should examine policies to determine if they obstruct articulation.	65	64	66	65

Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
	%			
7.2. Educational institutions and clinical facilities should collaborate to increase integration and improvement of clinical and didactic instruction.	63	64	79	78
13.1. ADA should assume leadership in identifying options, career advancement and change.	62	63	71	70
13. Education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress.	62	61	66	65
1. Alliance in service and education should be strengthened.	62	60	66	69
2.1. ADA should conduct role delineation studies beyond current efforts.	61	59	72	69
12. Manpower requirements, adequacy of resources, and effective collaboration should be considered in establishment and termination of programs.	60	62	62	61
7.4. A broad array of clinical patterns and sites should be used.	60	61	71	69
9.6. Programs for dietetic education faculty should include advanced study in a subject matter area in dietetics.	60	60	75	74

Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
<hr/>				
%				
<hr/>				
<u>somewhat urgent (50-59%):</u>				
9.6c. Programs to prepare dietetic education faculty should include health care delivery and interdisciplinary processes.	58	61	70	71
5.3. Research to improve the methodology of performance-based testing should be supported.	58	57	59	54
7.1. Educational institutions should be responsible for dietetic education with planning, implementation, and evaluation responsibilities shared with clinical affiliates.	57	58	64	64
14. Information relating to administration and planning in dietetic education should be collected and shared systematically.	57	57	57	57
8.1. Research is needed on extent of clinical experience needed.	57	55	64	62
9.4. Clinical and academic faculty should increase efforts to test clinical theories.	56	59	69	69
12.3. Dietetic students should receive instruction in basic sciences through participation in general university courses.	56	58	66	67



Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
	%			
5. Expansion of new occupations, programs, and entry level requirements should be controlled.	56	57	64	63
6. Networks should be established to ensure information sharing on continuing education matters.	55	56	66	67
5.1. Accreditation of dietetic education programs should be linked to justification.	55	55	68	67
7.3. Formal degree and continuing education programs should be designed for better preparation of faculty.	55	55	57	56
13.4. Dietetic education programs should evaluate student selection procedures to identify more reliable indicators of academic success.	55	55	55	52
8. Research in clinical education methods and theory must be greatly expanded.	53	54	58	55
10.1. Administrators of dietetic education programs should assess scholarly activity in determining faculty and fiscal needs.	53	53	62	61
9.6b. Programs to prepare dietetic education faculty should include preparation in professional education.	52	52	59	57

Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
	%			
10. Support for research in dietetic education should be increased; dietetic faculty should strengthen commitment to research.	52	51	51	51
9.1. ADA should encourage qualified universities to develop advanced programs for preparation of master clinicians.	51	51	60	60
6.1. ADA should participate in a National Coalition for Continuing Education for the provision of leadership and services at all levels.	50	52	53	53
5.2. Registration should be based on validated role delineations and definitions.	50	49	54	53
<u>least urgent (&lt; 50%):</u>				
9.2. Any process of credentialing master clinicians should focus on the competencies essential for practice.	49	50	61	62
13.3. Directors of dietetic programs should establish links with local secondary school systems to inform students about dietetic careers.	47	48	42	41
7.5. Various methods of learning for clinical competence should be developed in sites other than patient health service facilities.	47	46	57	54

Table 7: (cont.)

recommendation	priority recommendations		essential recommendations	
	group mean	weighted mean	group mean	weighted mean
	<hr/>		%	<hr/>
3.1. Programs should include significant liberal-general education.	44	44	49	49
13.5. Minority representation in dietetic education programs should be strengthened.	41	40	33	31
11. Dietetic education programs should increase the representation of minorities in leadership positions.	40	40	33	31

Generally, recommendations that were rated as most urgent and least urgent by the groups were considered similarly on the basis of essentiality and urgency as presented in Table 6. There were some differences, however, with respect to rank ordering of the recommendations.

The four recommendations listed in Table 7 as most urgent were in the "most essential and urgent" category in Table 6. In Table 7, however, the order of primary recommendation 2 and corollary 12.2 was reversed from that in Table 6. The other three recommendations in the "urgent" category (Table 7) based on priorities for implementation (nos. 4, 9, 9.5) were rated as "moderately essential and urgent" according to the data in Table 6.

According to the priority data in Table 7, the six recommendations considered as "least urgent" for implementation also were among the "least essential and urgent" recommendations in Table 6. The latter ratings were based on the percentages of survey respondents selecting recommendations as "essential and urgent."

Eight of the twelve "moderately urgent" priorities in Table 7 were considered "somewhat essential and urgent" according to the approach used for analyzing responses in Table 6. Three of the remaining four were rated "not as essential or urgent" and the other "moderately urgent" priority also was judged as "moderately essential and urgent" (Table 6).

According to the prioritization of recommendations, nineteen were judged as "somewhat urgent," indicating 50 to 59 per cent considered the recommendations as "essential, urgent" or "important, somewhat urgent." Analysis of this grouping of recommendations in relation to Table 6 revealed that two were in the "somewhat essential and urgent,"

twelve were "not as essential and urgent" and five were in the "least essential and urgent" categories in that table.

These data indicate that the priorities for implementation were somewhat different when the two response categories concerned with degree of urgency were combined in evaluating the NCAHE recommendations. Also, comparison of the data in Table 7 with regard to priority versus essentiality of recommendations revealed several differences. For example, primary recommendation 3 was the highest rated of all the recommendations when "essential, urgent" and "essential, not urgent" responses were combined; however, the urgency evaluation placed three other recommendations as greater priorities for implementation in dietetics.

Review of the data according to the two approaches for analyzing the recommendations in Table 7 reveals a number of other differences. In sixteen instances, the percentage of the survey groups considering recommendations as either "essential and urgent" or "essential, not urgent" was 10 per cent or more above the combined percentage of "essential, urgent" and "important, somewhat urgent" responses. Importance and urgency for implementation thus appear to be somewhat different dimensions in relation to these recommendations.

#### Comparison of Ratings of NCAHE Recommendations by Survey Groups

##### Similarities in Ratings of Recommendations

Table 8 includes a listing of the NCAHE recommendations by number that were rated similarly by all groups in the survey sample, based on the categories of essentiality and urgency established for the analysis presented in Table 6. Chi square analysis was used to compare ratings of

Table 8: NCAHE recommendations rated similarly by all groups in survey sample<sup>1</sup>

most essential and urgent <sup>2</sup>	moderately essential and urgent	somewhat essential and urgent	not as essential and urgent	least essential and urgent
15 <sup>3</sup>	4	7.2	13	7.3
12.2	12.1	7	1	9.2
3	9.5	9.3	12	6.1
		9.6a	5	3.1
		13.1	9.4	
		13.2	6	
		7.4	10.1	
			9.6b	
			13.4	
			14	

<sup>1</sup>Refer to Table 6 for text of recommendations. Groups in sample are defined in Table 1. In analysis of ratings by type of group,  $\chi^2$  values for recommendations listed were nonsignificant (i.e.,  $P > .05$ ).

<sup>2</sup>Essentiality and urgency categories established from overall group ratings; refer to Table 6.

<sup>3</sup>Refers to recommendation no. in survey instrument, ordered according to rank in Table 6.

the recommendations among the survey groups. Analyses for which chi square values were nonsignificant (i.e.,  $P > .05$ ) are presented in Table 8.

Of the forty-four NCAHE primary recommendations and corollaries evaluated in the study, chi square values were nonsignificant in analysis of twenty-seven. In the most essential and urgent category, three of the four recommendations were rated similarly by all groups, which suggests concurrence in the profession on the most essential issues in dietetic education. Three of the four recommendations in the "moderately essential and urgent" and seven of the ten in the "somewhat essential and urgent" categories also were rated similarly.

Ratings among the groups did not agree as frequently on the recommendations considered to be less essential and urgent. The survey groups agreed on ten of the fifteen "not as essential and urgent" and on only four of the eleven "least essential and urgent" recommendations.

Data indicate a fairly high degree of consensus among the national and state leadership and educator groups and dietetic practitioners in identifying the more essential and urgent needs in dietetic education. On recommendations generally considered as having less essentiality and urgency, however, the groups tended to disagree somewhat.

#### Differences in Ratings of Recommendations.

In Tables 9 and 10, the recommendations and corollaries on which ratings were related to survey group membership are listed. Chi square values were significant ( $P \leq .05$ ) for the analysis of ratings on seventeen of the NCAHE recommendations.

Table 9 summarizes the key differences among the survey groups in ratings of urgency of the NCAHE recommendation; the key differences in

Table 9: Key differences among survey groups in ratings of urgency of NCAHE recommendations for the dietetic profession and dietetic education<sup>1</sup>

recommendation no. <sup>2</sup>	group mean	groups in sample <sup>3</sup>						
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners
%								
<u>most essential and urgent</u>								
2	76	H						L
<u>moderately essential and urgent</u>								
9	72		L					
<u>somewhat essential and urgent</u>								
2.1	61		L			H		L
12.3	56		L	H			L	
7.1 <sup>†</sup>	57							

<sup>1</sup>Urgency refers to combined responses of (1) essential, urgent priority and (3) important, somewhat urgent. Detailed distributions of responses and  $\chi^2$  values are in Table 14 (Appendix E). Recommendations with ratings unrelated to group ( $\chi^2$ ,  $P > .05$ ) are shown in Table 8; those listed in this table had significant  $\chi^2$  values ( $P \leq .05$ ). Key differences are defined as follows:

H = % of specific group responding (1) or (3) is  $\geq 10\%$  above mean % of total sample (referred to as group mean in Table 7).

L = % of specific group responding (1) or (3) is  $\leq 10\%$  below mean % of total sample.

<sup>2</sup>Recommendations are ordered according to categories and rank order in Table 6; text of NCAHE recommendations is included in that table. Recommendations marked with a symbol (+) had significant  $\chi^2$  values; however, none of the group responses met the criteria for key differences.

<sup>3</sup>Refer to Table 1 for size and definitions of groups.



Table 9: (cont.)

recommendation no.	group mean	groups in sample						
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners
	%							
<u>not as essen- tial or urgent</u>								
9.6c	58			H			L	
5.1	55	H	L		H		L	
5.3	58			H	H			L
8.1	57	H	L					L
8 <sup>†</sup>	53							
<u>least essen- tial and urgent</u>								
9.1	51	H	L					
7.5	47				H			
5.2	50					H	L	L
13.3	47	L					H	
10	52		L			H	H	
11	40		L		H			
13.5	41	L			H			

Table 10: Key differences among survey groups in ratings of essentiality of NCAHE recommendations for the dietetic profession and dietetic education<sup>1</sup>

recommendation no. <sup>2</sup>	group mean	groups in sample						
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners
%								
<u>most essential and urgent</u>								
2 <sup>†</sup>	87							
<u>moderately essential and urgent</u>								
9 <sup>†</sup>	77							
<u>somewhat essential and urgent</u>								
2.1	72	H						L
12.3	66	H	L					
7.1	64		H			L		

<sup>1</sup>Essentiality refers to combined responses of (1) essential, urgent priority and (2) essential, not urgent. Detailed distributions of responses and  $\chi^2$  values are in Table 14 (Appendix E). Recommendations with ratings unrelated to group ( $\chi^2$ ,  $P > .05$ ) are shown in Table 8; those listed in this table had significant  $\chi^2$  values ( $P \leq .05$ ). Key differences are defined as follows:

H = % of specific group responding (1) or (2) is  $\geq 10\%$  above mean % of total sample (referred to as group mean in Table 7).

L = % of specific group responding (1) or (2) is 10% below mean of total sample.

Refer to Table 9 for additional explanatory footnotes.

<sup>2</sup>Recommendations marked with a symbol (+) had significant  $\chi^2$  values; however, none of the group responses met the criteria defined for key differences.

Table 10: (cont.)

recommendation no.	group mean	groups in sample						
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practi- tioners
	%							
<u>not as essen- tial or urgent</u>								
9.6c <sup>†</sup>	70							
5.1	68		H		L	H		L
5.3	59				H			L
8.1	64	H						L
8	58	H					H	L
<u>least essen- tial and urgent</u>								
9.1	60				H	L	L	
7.5	57	H				L	H	
5.2	54	H						L
13.3	42			L		L	H	
10	51				H	L	L	
11	33		L				H	
13.5	33		L				H	

ratings of essentiality are in Table 10. Detailed distribution of responses of the survey groups is in Table 14 (Appendix E).

Urgency refers to combined responses on ratings for recommendations of "essential, urgent" and "important, somewhat urgent"; whereas essentiality refers to combined "essential, urgent" and "essential, not urgent" responses. To examine differences among the seven survey groups, the criterion for a key difference was defined as a deviation of ten percentage points higher or lower than the group means presented in Table 7. The symbol, H, is used in Tables 9 and 10 to indicate that the response of a specific group was 10 per cent or more above the average of all group responses; i.e., that the specific group placed greater urgency or rated a recommendation as more essential. Conversely, the symbol, L, was used to indicate a rating of a specific group was 10 per cent or more below the average of all group responses.

In those cases when the group mean was at variance ( $\pm 10$  per cent) with the average group mean, the state presidents and practitioners consistently rated the recommendations lower. When the group response of the house of delegates members and CUP and internship directors deviated 10 per cent or more, the recommendations were rated as having greater urgency than indicated by the group mean (Table 9). Also, the national governance group rated four of the recommendations as more urgent and two as less urgent in the six instances in which the group deviated from the group mean. The directors of dietetic technician programs rated four recommendations as less urgent and two as more urgent than indicated by the group mean.

On corollary recommendation 7.1, the chi square value was significant; however, none of the specific group responses met the criteria for

key differences as defined above. As shown by review of Table 9 and pointed out in the discussion of Table 8, disagreement among groups was more frequent on the relative urgency of recommendations generally considered to be less essential and urgent than on those rated as having greater urgency.

In Table 10, key differences in essentiality ratings were not found among the groups on two primary recommendations (nos. 2 and 9) and on corollary 9.6c. When deviation from the group mean occurred, the national governance consistently rated the recommendations as more essential and the practitioners rated the recommendations as less essential. With one exception, the internship directors also ranked the recommendations as less essential than the average group mean indicated in instances of variance. The house of delegates response differed in only one instance and the state presidents in five. Two recommendations were rated as more and four, as less essential. The CUP directors rated three recommendations as more and one as less essential, whereas the dietetic technician directors considered five of recommendations as more essential and two others as less essential than was indicated by group mean. Again, as with urgency ratings, most disagreements were on the relative essentiality of the recommendations that were in the "not as essential and urgent" and "least essential and urgent" categories.

#### Areas of NCAHE Recommendations

The six major areas of the recommendations established by the National Commission on Allied Health Education are listed in Table 11. Five of the fifteen primary recommendations were concerned with determining appropriate content and level of educational programs and three

Table 11: Major areas of NCAHE recommendations<sup>1</sup>

area	primary recommendation no. <sup>2</sup>
Strengthening alliances in service and education	1
Determining appropriate content and level of educational programs	2-6
Improving clinical education	7,8
Building capability for leadership and innovation	9-11
Providing for planning and administration without waste	12-14
Supplying adequate funding	15

<sup>1</sup>Refer to Appendix A for listing of recommendations.

<sup>2</sup>Corollaries are classified according to the primary recommendations to which they are related.

each with leadership development and with planning and administration. The remaining four recommendations were on strengthening alliances in service and education, improving clinical education, and funding for allied health education.

In Table 12, recommendations and corollaries within the six major NCAHE areas are shown for the essentiality and urgency categories established in Table 6. Two of the five primary recommendations on determining content and level of educational programs were considered "most essential and urgent" by the survey groups, as was the primary recommendation on funding.

One of two primary recommendations rated as "moderately essential and urgent" was concerned with level and content of programs and the

Table 12: Essentiality and urgency of recommendations for dietetic education according to areas of NCAHE recommendations<sup>1</sup>

NCAHE area	most essential and urgent	moderately essential and urgent	somewhat essential and urgent	not as essential and urgent	least essential and urgent
	1 <sup>2</sup>				
Strengthening alliances in service and education					
Determining appropriate content and level of educational programs	2 3	4	2.1	5 6 5.1 5.3	5.2 6.1 3.1
Improving clinical education			7.2 7 7.4 7.1	8.1 8	7.3 7.5
Building capability for leadership and innovation		9 9.5	9.3 9.6a	9.6c 9.4 10.1 9.6b	9.1 9.2 10 11

<sup>1</sup>Refer to Table 6 for text of recommendations. Essentiality and urgency categories established from overall group ratings (Table 6).

<sup>2</sup>Refers to recommendation no. in survey instrument; recommendations are ordered within categories according to rank in Table 6.

Table 12: (cont.)

NCAHE area	most essential and urgent	moderately essential and urgent	somewhat essential and urgent	not as essential and urgent	least essential and urgent
Providing for planning and adminis- tration without waste	12.2	12.1	13.1 13.2 12.3	13 12 13.4 14	13.3 13.5
Supplying adequate funding	15				



second with leadership development. Of the two primary recommendations on clinical education, one was rated "somewhat essential and urgent" and the other, "not as essential and urgent."

The primary recommendation on strengthening alliance and service was rated "not as essential and urgent," as were the remaining two of the five recommendations on level and content of programs. All three primary recommendations on planning and administration also were in the "not as essential and urgent" category.

As discussed previously, the NCAHE corollaries are procedural recommendations for implementing the primary recommendations. The ratings of the corollaries indicated differing priorities on strategies for implementation of the recommendations in dietetic education. In several instances, the corollaries were considered more important than the related primary recommendations. For example, the three corollaries related to one of the recommendations on planning and administration (no. 12) were rated as more essential and urgent than the primary recommendation.

One of the six corollaries on level and content of programs and three of the six corollaries on clinical education were "somewhat essential and urgent," whereas the other corollaries in these two NCAHE areas were considered to be less essential and urgent. A third of the leadership and innovation corollaries were either "moderately" or "somewhat essential and urgent." Although the primary recommendations on planning and administration were rated "not as essential and urgent," five of the eight corollaries were considered "somewhat," "moderately," or "most essential and urgent."

## SUMMARY AND CONCLUSIONS

### Summary

The National Commission on Allied Health Education (NCAHE) was formed in 1977 for the purpose of conducting a two year study on allied health education in the United States. The fifteen member Commission which included leaders in allied health, nursing, and medicine was charged with the responsibility of making recommendations in allied health education for the 1980's, based on assessment of the developments in the field during the past decade. After two years of studying and evaluating allied health education, the Commission proposed fifteen primary and sixty-three related corollary recommendations. Primary recommendations were formulated to provide major policy guidelines, while corollaries were intended to suggest means of attaining the goals implicit in the primary recommendations.

The Commission contended that the recommendations of general concern should be evaluated by many groups involved in allied health education. The objective of this research was to assess the importance and priority of each relevant recommendation of The National Commission on Allied Health Education for the dietetic profession and particularly, for dietetic education.

The sample for the study included members of the 1979-1980 governance groups and major committees of The American Dietetic Association (ADA), presidents of state dietetic associations, directors of dietetic internships and coordinated undergraduate programs, directors of approved

dietetic technician programs, and a random sample of dietetic practitioners. The sample totalled 607 potential respondents. After initial and follow-up mailings, 71.9 per cent were returned ( $n = 437$ ).

The instrument was developed and evaluated through two drafts, involving reviews by dietetic educators, an education evaluation specialist, the NCAHE study director, and two NCAHE Commission members. The fifteen primary recommendations and twenty-nine corollaries proposed by the NCAHE were modified slightly by the research committee and consultants for relevance to the dietetic profession. The final questionnaire consisted of two parts. In Part I, participants were asked to evaluate the selected NCAHE recommendations with respect to appropriate priorities for dietetic education. A five point scale was used for assessment of the importance and timeliness of the primary recommendations and corollaries. Part II consisted of ten questions concerning demographic information to be used for analyzing responses and describing the sample.

Five categories were developed from the relative ordering of the recommendations based on essentiality-urgency ratings: most essential and urgent, moderately essential and urgent, somewhat essential and urgent, not as essential and urgent, or least essential and urgent. Three primary recommendations and one corollary were rated as "most essential and urgent." The recommendation regarding increased ADA legislative activities for support of allied health education and manpower was rated by the survey groups as the most essential and urgent recommendation. Also identified as "most essential and urgent" was the corollary concerned with the establishment and continuation of programs based on the availability of clinical affiliations, funds, and adequacy of the clinical practicum. The recommendation which called for linking

education to practice through role delineation was highly rated by the participants. The last recommendation in the "most essential and urgent" category was concerned with flexibility in dietetic education and preparation of students who are competent and adaptable.

Two recommendations and two corollaries were rated as "moderately essential and urgent." The corollary that called for cooperation with institutions and existing programs before establishing new programs was listed in this category. A primary recommendation considered "moderately essential and urgent" was concerned with the inclusion of human values, illness prevention, and delivery systems in dietetic education programs.

The contention that the development of leadership in the clinical, managerial, and educational areas should be a priority for dietetic education was regarded by the participants as "moderately essential and urgent." A corollary concerned with the provision of continuing education programs by educational institutions and others for the purpose of teaching planning and management skills to practitioners also was in this category.

The "somewhat essential and urgent" category consisted of one recommendation and nine corollaries. The primary recommendation was concerned with the integration of clinical and didactic education and the expansion of clinical education sites and methods, while one of its corollaries related to the collaboration between educational institutions and clinical facilities. Another corollary related to broadening the array of dietetic education programs, clinical patterns and sites to enhance both the clinical practicum and future job placement of graduates. The corollary that focused on the responsibility of educational institutions for dietetic education with certain responsibilities shared with clinical

affiliates was considered "somewhat essential and urgent" by survey respondents.

The contention that dietetic students should receive instruction in basic sciences through participation in general university courses also was listed as "somewhat essential and urgent," along with the recommendation that ADA should conduct role delineation studies beyond current efforts. Another corollary in this category concerned the need for studies to be conducted by universities and health service organizations of the effects of clinicians on the cost and effectiveness of nutritional care services. One similarly rated corollary was related to programs for preparation of dietetic education faculty and the inclusion of advanced study in a subject matter area in dietetics. The last two corollaries in the "somewhat essential and urgent" classification were related to ADA's leadership role in delineating career options and the examination of articulation policies by the ADA Commission on Accreditation.

Seven recommendations and eight corollaries were listed in the "not as essential or urgent" category. The "least essential and urgent" category included two primary recommendations and nine corollaries.

Relative priorities for implementation of the NCAHE primary recommendations were calculated by summing weighted mean percentages of the categories "essential and urgent" and "important, somewhat urgent." Based on group priority means, the recommendations and categories were categorized as follows: urgent, moderately urgent, somewhat urgent, and least urgent.

The recommendations and corollaries also were rated on the basis of essentiality to the dietetic profession and dietetic education. Essentiality was determined by summing the sample groups' mean percentage

responses to recommendations as either an essential and urgent priority for implementation or as an essential recommendation, but not urgent.

Generally, recommendations that were rated as most and least urgent by the groups were considered similarly on the basis of essentiality and urgency. Differences existed, however, with respect to rank ordering of the recommendations.

Chi square analysis was used to compare ratings of the recommendations among the seven survey groups. Of the forty-four NCAHE primary recommendations and corollaries evaluated in the study, chi square values were nonsignificant (i.e.,  $P > .05$ ) in analysis of twenty-seven. In the most essential and urgent, category, three of the four recommendations were rated similarly by all groups, which suggests concurrence in the profession on the most essential issues in dietetic education. Among the top three categories of essentiality and urgency ("most essential and urgent," "moderately essential and urgent," "somewhat essential and urgent"), thirteen of the eighteen recommendations and corollaries were rated similarly by the survey groups.

Ratings among the groups were not in agreement as frequently on the issues considered to be less essential and urgent. The survey groups agreed on ten of the fifteen "not as essential and urgent" and on only four of the eleven "least essential and urgent" recommendations.

Key differences were analyzed among the survey groups in ratings of urgency and essentiality of the NCAHE recommendations. When the individual group mean was at variance ( $\geq 10$  per cent) with the sample group mean the state presidents and practitioners consistently rated the recommendations lower on the issue of urgency. When the group response of the house of delegates' members and CUP and internship directors deviated 10

per cent or more from the group mean, the recommendations were rated as having greater urgency than indicated by the group mean. The national governance groups tended to rate the recommendations as more urgent, whereas the dietetic technician directors tended to regard them as less urgent.

Regarding the issue of essentiality, when specific group ratings deviated from the overall ratings the national governance consistently rated the recommendations as more essential and the practitioners rated the recommendations as less essential. The internship directors and state presidents tended to regard the recommendations as less essential, while the CUP and dietetic technician directors tended to rate the recommendations as more essential.

The six major areas of the recommendations established by the National Commission on Allied Health Education were strengthening alliances in service and education, determining appropriate content and level of educational programs, improving clinical education, building capability for leadership and innovation, providing for planning and administration without waste, and supplying adequate funding. Two of the five primary recommendations on determining content and level of educational programs was considered "most essential and urgent" by the dietetic survey groups, as was the primary recommendation on funding. One of two primary recommendations rated as "moderately essential and urgent" was concerned with the level and content of programs and the second with leadership development. Of the two primary recommendations of clinical education, one was rated "somewhat essential and urgent" and the other, "not as essential and urgent."



The primary recommendation on strengthening alliance and service was rated "not as essential and urgent," as were the remaining two of the five recommendations on level and content of programs. All three primary recommendations on planning and administration also were in the "not as essential and urgent" category.

### Conclusions

The data revealed that a broad consensus concerning the essentiality and urgency of the NCAHE recommendations for dietetic education tended to exist among the seven groups in the survey sample. In the categories termed "most essential and urgent," "moderately essential and urgent," and "somewhat essential and urgent," thirteen out of eighteen recommendations were rated similarly by all the groups. Differences in ratings of the NCAHE recommendations were most frequently in the "not as essential or urgent" category and "least essential and urgent" category.

Four recommendations that were rated as "most essential and urgent" by the respondents were listed in the NCAHE areas of content and level of educational programs, planning and administration without waste, and funding. The recommendation regarding increased ADA legislative activities for support of allied health education and manpower was rated as the most essential and urgent recommendation. The high rating of this recommendation suggests that dietitians acknowledge the importance of allied health education and the role that ADA has in participating in legislative activities supporting allied health.

Also identified as "most essential and urgent" was the corollary concerned with the establishment and continuation of programs based on the availability of clinical affiliations, funds, and adequacy of the



clinical practicum. This corollary is relevant particularly to educators of the dietetic profession and all others who are involved in dietetic program establishment and expansion.

Two other highly rated recommendations were in the NCAHE area, determining appropriate content and level of education programs. One recommendation called for the linking of education to practice through role delineation, and the second recommendation was related to flexibility in dietetic education. Linking education to practice through role delineation requires studies to determine the roles and functions of members of the dietetic education team. The American Dietetic Association has conducted role delineation studies of clinical dietetic personnel; further efforts in identifying roles of other dietetic personnel are necessary for better linkage of education to practice needs. The recommendation concerned with increased flexibility in dietetic education programs has particular relevance for dietetic educators. They should be cognizant of changing health science and should adapt the educational curriculums accordingly.

Further research is needed on strategies for implementation of the most highly rated recommendations and corollaries. Results of this study should be disseminated to leaders and educators in dietetics who are responsible for policy-making decisions in the profession and in dietetic education. Also, input on the recommendations should be secured from other relevant sources; e.g., health care administrators, other health professionals, and administrators in higher education.

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## APPENDIXES

## APPENDIX A

### Primary and Related Corollary Recommendations of the National Commission on Allied Health Education

PRIMARY AND RELATED COROLLARY RECOMMENDATIONS OF THE  
NATIONAL COMMISSION ON ALLIED HEALTH EDUCATION<sup>1</sup>

Strengthening Alliances in Service and Education

Recommendation 1: Alliance in service and education should be strengthened, based on an appreciation of the interdependence of all health occupations and an understanding of their roles, functions, and special contributions.

Determining Appropriate Content and Level  
of Educational Programs

Recommendation 2: Education should be linked to practice through role delineations.

2.1: The federal government or a private foundation should provide adequate funding to an organization representing broad interests in allied health education (such as ASAHP) for a four-stage project to promote more effective use of role delineation studies.

- a. "Lessons Learned Workshop" and Development of Manual.
- b. National meeting of allied health professional organizations on role delineation development, and establishment of study groups to determine commonalities in practice requirements.
- c. Regional workshops to develop strategies for advocating and explaining the use of role delineations by faculty.
- d. The results of these meetings and workshops should be widely disseminated by the coordinating organization.

Recommendation 3: Allied health education should prepare students who can meet standard performance objectives and adapt to changing health service needs; flexibility in the methods of preparation should be encouraged.

3.1: Demonstration projects to design and implement curriculum modules based on role delineations for two or more occupations should be funded.

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<sup>1</sup>Source: Reference (3).

3.2: ASAHP should conduct a workshop for directors of allied health programs preparing students for more than one occupational role to identify similarities and differences in educational objectives, content, and procedures of these programs.

3.3: Students in collegiate allied health education programs should be allowed significant opportunities for selection of courses in humanities, social sciences, and natural sciences, in keeping with the students' individual talents and interests for personal enrichment.

3.4: Allied health programs should develop mechanisms to permit allied health faculty to hold joint appointments and remain active in those disciplines in which they have completed graduate study.

3.5: Particularly at the graduate level, academic departments of allied health should provide appointments for faculty whose preparation is in the sciences or humanities and who may not be qualified as allied health practitioners.

Recommendation 4: To meet new service demands, all allied health educational programs should include the study of (a) human values, (b) illness prevention and health promotion methods, and (c) delivery systems, including roles and functions of health personnel, patients' rights, legal risks, cost-effectiveness, and quality control.

4.1: The federal government and/or private foundations should support projects to develop interdisciplinary instructional modules in human values, prevention, and management and coordination of services, and to introduce the modules in the curriculum of educational programs.

4.2: Faculty development workshops and continuing education courses should be designed specifically to prepare faculty to integrate these topics in the courses they teach and/or in clinical instruction.

Recommendation 5: In the future, new health service needs should be met, where possible, without establishing new occupations and programs; unnecessary expansion of entry-level requirements should be controlled.

5.1: Funds should be provided for projects demonstrating ways of meeting new health service needs without creating new occupations or specialties, such as:

- short-term supplemental preparation for existing health personnel
- short-term preparation in health applications for college graduates who majored in relevant nonhealth fields, such as psychology, sociology, and education--such programs should be developed in consultation with educators from these nonhealth fields

- in-service training programs for persons employed in nonhealth occupations who have contact with the patient/client population
- incorporation of new objectives in existing programs

5.2: Public support for and accreditation of allied health programs should be linked to justification of the level and length of programs based on competencies needed and utilized in the delivery of health service.

5.3: The National Commission for Health Certifying Agencies should adopt, as a criterion for accepting certifying agencies as members, that certification and recertification mechanisms must be based on validated role delineations.

5.4: Funds should be provided for research to improve the methodology of performance-based testing.

Recommendation 6: The importance of continuing education should be recognized and networks should be established to ensure collaboration and information sharing on continuing education matters.

6.1: A National Coalition for Continuing Education should be established to provide leadership and services at national, regional, and local levels.

### Improving Clinical Education

Recommendation 7: Clinical and didactic education should be better integrated; and the range and types of clinical education sites and methods should be expanded to meet new health service demands.

7.1: Educational institutions, which offer the didactic portion of an allied health program, should be responsible for the total education to ensure better integration of didactic and clinical education and sufficient breadth of clinical experiences; however, they must share the responsibility for planning, management, implementation, and evaluation with their clinical affiliates.

7.2: A written agreement should be formulated between the educational institution and each agency utilized for clinical education for the purpose of delineating objectives, authorities, responsibilities, and relationships.

7.3: Educational institutions and clinical facilities should collaborate, or reevaluate current collaborative arrangements, to increase integration and improvement of clinical and didactic instruction through procedures such as:

- a. academic appointments for faculty responsible for planning and supervising clinical instruction

- b. mechanisms to permit academic faculty to remain clinically current
- c. organized joint planning for the overall curriculum by clinical and academic faculty
- d. involvement of master clinicians in overall curriculum development
- e. collaboration with health service providers to secure relevant preceptorships for and facilitate placement of graduate students

7.4: Formal degree programs as well as continuing education programs should be designed specifically to prepare faculty to plan, supervise, and evaluate clinical practice.

7.5: Educational institutions should increase the use of the broad array of clinical patterns and sites to enhance both the clinical practicum and future job placement of clinical trainees.

7.6: Various methods of learning for clinical competence should be developed in sites other than patient health service facilities. These may include simulated clinical learning programs, programmed laboratory experiences, and other patient/client service areas.

Recommendation 8: Research in clinical education methods and theory must be greatly expanded.

8.1: Intensive research on methods of clinical education should be conducted:

- a. to identify the types of professional learning that are most dependent on practical experiences
- b. to validate or modify existing standards for the amount and type of clinical experience required for program accreditation and/or practitioner certification
- c. to develop valid methods of measuring the cost of the clinical practicum
- d. to evaluate the clinical education to determine that the objectives have been achieved
- e. to determine the relative cost-effectiveness of different patterns of clinical education, including different sequencing of clinical and didactic components

## Building the Capability for Leadership and Innovation

Recommendation 9: The development of leadership in the clinical, managerial, and educational areas should be a priority for allied health education.

9.1: Public agencies and private foundations should support qualified universities to develop advanced programs on a pilot or demonstration project basis for preparation of master clinicians.

9.2: Qualified universities and health service organizations should conduct carefully controlled studies of the effect of clinicians on the cost and effectiveness of allied health services.

9.3: "Field stations" should be established on a demonstration or trial basis to increase the volume, quality, relevance, and utilization of research in allied health clinical services.

9.4: Educational institutions, professional organizations, employers, and others should initiate, provide, and/or support programs of continuing education to teach planning and management skills to allied health personnel already in practice.

9.5: Programs to prepare allied health faculty should include:

- a. the study of history and philosophy of higher education
- b. a knowledge of health care delivery
- c. research methodology and ways it can be applied in day-to-day teaching
- d. interdisciplinary processes
- e. instructional methods, especially as they apply to clinical settings and direct patient care
- f. advanced study and methods in each clinical field
- g. coursework in curriculum development and planning

Recommendation 10: Support for research on allied health education should be substantially increased, and allied health faculty should be encouraged to strengthen their commitment to research.



10.1: Administrators of allied health programs should regard scholarly activity as a necessary part of the total activities of faculty and take this into account in determining faculty needs, budgeting, and selection and promotion of faculty.

10.2: Faculty development institutes and workshops should include sessions on research and writing.

10.3: Public and private funds should support five or six regional centers for research and development in allied health.

Recommendation 11: Educational institutions should strengthen their efforts to increase the representation of minorities and women in leadership positions.

11.1: Women and minorities should be encouraged to pursue advanced degrees and participate in leadership development programs.

#### Planning and Administration: Diversity Without Waste

Recommendation 12: The establishment, expansion, maintenance, reduction, and termination of allied health programs should be based on manpower requirements, adequacy and efficient use of available resources, and collaboration within and among educational and other institutions.

12.1: In establishing new programs and evaluating existing ones, consideration should be given to the different service areas of different types of institutions: State-controlled institutions in general must attempt to relate their production of health personnel to state or regional requirements. Private institutions--both nonprofit and proprietary--must develop programs that meet the requirements of their service area; for private nonprofit institutions the service area may not be geographically defined, whereas for proprietary institutions the service area will probably be local.

12.2: Market analysis techniques should be used to advise program directors and school administrators of the employer demand primarily and the attractiveness to students secondarily.

12.3: Alternatives to establishing new programs to meet manpower requirements should be developed, especially when the additional supply requirements are small or likely to be saturated after a short time period. Such alternatives may include:

- alternative service delivery modes to improve distribution of personnel (for example, to bring services of existing personnel to underserved rural areas)
- expansion of existing programs

- extension of existing capabilities to other geographical areas (such as the urban-rural extension model)
- short intensive programs in regional centers that have appropriate capabilities
- student and/or faculty exchange
- cooperative arrangements for rotating programs, which move periodically as the need is saturated, or for programs with built-in termination dates

12.4: As a criterion for establishing and continuing programs, educational institutions must assure:

- the adequacy of clinical affiliations and that students receive appropriate clinical practicum (see Recommendation 7 and Corollaries 7.1 to 7.6).
- sufficient funds to continue a new program through at least two completing classes.

12.5: Efforts should be made to utilize existing community resources and collaborate with other institutions (both educational and clinical) that already have programs in place of that have some of the required resources.

12.6: Arrangements should be made for maximum use of existing institutional resources, including shared courses.

12.7: If fewer than four out of five graduates who seek employment in the occupation for which they prepared succeed in finding employment, the program should be terminated unless there is reasonable assurance of continuing need for a reduced number of graduates and the number of students enrolled can be reduced without affecting the quality of education.

12.8: New doctoral programs for health occupations should be developed only if existing doctoral programs in basic sciences or other fields do not meet the needs for production of persons with doctoral-level competencies.

12.9: Funds should be provided by the federal government or private foundations to a statewide coordinating agency such as the Southern Regional Education Board for a two-stage project to increase the use by educational institutions and state and regional agencies of guidelines based on the considerations previously outlined:

Stage One--Conference on allied health education program establishment and continuing review.

Stage Two--Paid Consultancies.

Recommendation 13: Educational and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress.

13.1: Efforts to improve articulation should include the following:

- a. use of equivalency examinations and other assessment tools for identifying objectives already attained and still to be attained
- b. modularization of courses with waiver of portions that duplicate prior learning experiences
- c. specification of practice-based performance objectives and reporting attainment of specified objectives
- d. flexible scheduling and other approaches enabling persons already working in allied health occupations to study on a part-time basis

13.2: Allied health administrators should take the responsibility for comparing their own programs' content and structure with that of other programs that have been successful in facilitating articulation. Faculty development programs should include instruction in these methods.

13.3: ASAHP should sponsor a national conference on articulation with problem-solving workshops.

13.4: Funds should be provided to develop nationally recognized equivalency exams, similar to those of the College Level Examination Program, for allied health education subject matter of a multidisciplinary nature (for example, anatomy, medical terminology).

13.5: Professional associations should take the lead in delineating career options for the occupations they represent and identifying ways of facilitating career advancement and change.

13.6: Accrediting bodies should examine their policies to determine if and how they may be obstructing articulation between levels and between disciplines.

13.7: The three regional higher education boards should examine the feasibility of establishing regional Bachelor of Health Science programs to allow persons prepared in occupations that are not articulated with the bachelor's level the opportunity to pursue further study in humanities, social sciences, and/or natural sciences, as well as provide greater exposure on an interdisciplinary basis to health problems.

13.8: Allied health administrators should establish links with local secondary school systems to inform students about allied health careers and requirements of educational programs and to encourage participation in work experiences in health settings during the high school years.

13.9: Educational institutions, with the advice and counsel of professional associations and practitioners, should evaluate student selection procedures to determine whether more reliable indicators of probable academic success than those presently in use can be found and utilized.

13.10: Recruitment efforts to increase minority representation in allied health programs should be strengthened through provision of counseling and financial assistance. Training institutes for allied health faculty and administrators should include seminars dealing with the matter of minority student recruitment.

13.11: It is imperative that hospitals, independent clinical laboratories, and other health service facilities provide clinical experiences to students of traditionally black institutions.

Recommendation 14: Information relating to administration and planning in allied health education should be collected and shared systematically.

14.1: ASAHP should seek funds from the National Institute of Education to establish an ERIC Clearinghouse on Allied Health Education.

14.2: A major thrust of the federal government's involvement in allied health education should be the systematic and continuous collection and dissemination of data on the numbers and distribution of health manpower in all occupational areas, including information on projected openings.

14.3: The federal government should continue to support biennial national inventories of allied health education programs.

14.4: The federal government should provide funds to the National Center for Higher Education Management Systems (NCHEMS) and/or similar organizations for development of a system of cost accounting for allied health programs to identify actual program costs which could be translated into costs per student for use of educational institutions and for a study of comparative costs to be used by educational institutions and professional associations at local, state, and national levels.

14.5: Schools of allied health should be encouraged to arrange exchange programs with faculty from other countries.

14.6: Administrators in allied health education programs for all levels of preparation should work closely with health planning and regulatory agencies, legislative bodies, and governing boards of academic institutions.

## Funding: Key to Future Progress

Recommendation 15: Significantly increased funding for allied health should be provided at the federal, state, and local government levels and from private resources.

15.1: Private and governmental funding agencies should require institutional commitment of funds, by the time the grant period ends, for projects that meet agreed upon objectives.

15.2: States with formula funding policies based on full-time enrollments should reexamine their policies and seek ways to permit greater flexibility.

15.3: The federal government should continue to provide funds for national data collection on allied health education and manpower.

15.4: The federal government should provide adequate funds to support research activities in allied health education and services. Such activities should include:

- a. Establishment of a longitudinal data base on students to assess the impact of institutional and program characteristics on student progress and to monitor trends in the characteristics and goals of the student pool.
- b. Systematic collection of information on allied health faculty to determine faculty development needs.
- c. Assessment of contributions of allied health personnel to meeting various national health priorities (for example, bringing services to underserved areas, cost containment).
- d. Application of role delineation studies to education, including establishment of commonalities in service functions and educational needs.
- e. Studies to improve the quality and cost-effectiveness of allied health education and services.
- f. Clinical research in allied health services.

15.5: The federal government should also provide adequate funds for student aid programs and special projects for the disadvantaged and disabled to accomplish the national goals of equal access to allied health education and improving health care for medically unserved or underserved groups.

15.7:<sup>1</sup> Federal funding of allied health education should be increased and maintained at a level consistent with contributions made to the health of the nation by allied health personnel.

15.8: ASAHP and its state chapters should arrange for experts in fund raising for allied health education projects to conduct workshops on the topic in conjunction with national and local allied health meetings.

15.9: ASAHP and its state chapters should educate health policy planners and legislators on the contributions made by allied health personnel in order to promote necessary and appropriate support for continuation and expansion of allied health education and services.

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<sup>1</sup>In the numbering scheme in the report of the National Commission on Allied Health Education, 15.6 was omitted.

## APPENDIX B

### Correspondence to Review Committee



(KSU Letterhead)

March 14, 1980

Dr. Engin I. Holmstrom<sup>1</sup>  
138 Graston Street  
Chevy Chase, Maryland 20015

Dear Dr. Holmstrom:

I enjoyed speaking with you recently regarding my proposed research. To refresh your memory let me briefly review my research plans.

At Kansas State, we are planning to send a questionnaire to participants concerning the recommendation of the National Commission on Allied Health Education (NCAHE). The objectives of the research are to: (a) evaluate and prioritize the recommendations as proposed by the NCAHE and consider implications for dietetic education; and (b) to assess the importance and indicate timeliness of each recommendation in relation to dietetic education. The questionnaire will be sent to the governance groups of The American Dietetic Association, State Presidents, Dietetic Internship and Coordinated Undergraduate Program Directors, and a random sample of hospital dietetic practitioners.

Enclosed you will find a copy of my research proposal including a draft of the questionnaire in Appendix A. The fifteen recommendations have been modified slightly for relevance to the dietetic profession. Would you please review the recommendations and note if they are in keeping with the original intent of the recommendations as proposed by the NCAHE? Any suggestions and/or criticism will be welcomed. After your comments have been taken into consideration, the questionnaire will be revised, as needed, and will be sent to participants by the last week in April.

Additionally, I have another request. Since my research is focusing on the allied health concept, is it possible that I may be able to obtain or borrow a copy of the original report or an advance copy of the Jossey-Bass publication, The Future of Allied Health Education:

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<sup>1</sup> Similar letters were sent to:  
Frank G. Dickey, Ed.D., Chairman, National Commission on Allied Health Education,  
William H. Knisely, President, Medical University of South Carolina, NCAHE Commission Member and member of ADA Advisory Committee.



Dr. Engin I. Holmstrom  
March 14, 1980  
Page Two

Alliances for the 1980's? Because of the nature of my research, I am sure this publication would assist me greatly.

I will be calling you during the week of March 24 to discuss your opinions and recommendations regarding the research proposal, so you need not reply in writing to this letter. Also, if you could tell me at that time where I may obtain a copy of the report, I would appreciate it. Thank you for your time and concern in reviewing the proposal and recommendations, and I look forward to talking with you.

Sincerely,

Judith M. Turcotte, R.D.  
Graduate Student

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

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Enclosure

## (KSU Letterhead)

April 18, 1980

Dr. Engin I. Holmstrom  
138 Graston Street  
Chevy Chase, Maryland 20015

Dear Dr. Holmstrom:

Recently, I sent you a copy of my research proposal, entitled, "Allied Health Education: Implications for the Dietetic Profession." As you may recall, the objectives of the proposed research were to evaluate and prioritize the recommendations as proposed by the National Commission on Allied Health Education and consider implications for dietetic education. Additionally, the importance and timeliness of each recommendation in relation to dietetic education would be assessed.

In our telephone conversation regarding the proposed research, you indicated that the fifteen primary recommendations were probably not fully representative of the Commission's findings. Your suggestion was that we might consider including several procedural recommendations relevant to the dietetic profession in the questionnaire.

Dr. Allene Vaden, my major professor, and I reviewed the procedural recommendations and selected the ones pertinent to the dietetic profession and to dietetic education. Also, those selected were modified somewhat to make them directly relevant to dietetics, and will be incorporated into the questionnaire under the respective primary recommendation. You will note we have kept the original numbering for the procedural recommendations to facilitate your review. Also, 9.1 and 9.2 were split into two procedural recommendations--or 9.1 and 9.1a and 9.2 and 9.2a.

Additionally, we modified primary recommendations numbers 3, 4, 9, 10, 11, and 12; and substituted the word "dietetic education" for allied health education. Since dietetics is an allied health profession, we believed this action would not negate the intent of the original recommendations but would permit evaluation in relation to education in dietetics.

With the increased number of statements to evaluate, the decision was made to collapse the two scales (one on importance, a second on priority) proposed earlier into the following scale, which incorporates importance and priority:

- (1) Essential recommendation for the dietetic profession,  
urgent priority for implementation

Dr. Engin I. Holmstrom  
April 18, 1980  
Page Two

- (2) Essential recommendation, but not an urgent priority
- (3) Important recommendation, and urgent
- (4) Important recommendation, but not urgent
- (5) Recommendation is of doubtful importance in dietetics

Enclosed, you will find a copy of the modified primary and selected procedural recommendations. Would you please review these to see if this is more representative of the Commission's findings? Again, your comments and suggestions are greatly appreciated. I will be calling you on the 25th of April for your remarks. I know this doesn't give you much time, but we are trying to get the instrument ready for distribution in May.

Thank you for your time and assistance.

Sincerely,

Judith M. Turcotte, R.D.  
Graduate Student

jmt

Enclosure

cc: Dr. Frank Dickey  
Dr. William Knisely

APPENDIX C  
Research Instrument

## (KSU Letterhead)

Recommendations of the National Commission on Allied  
Health Education (NCAHE): Priorities  
for the Dietetic Profession

## Instructions:

Please complete this questionnaire to assist us in analyzing implications of the recommendations of the National Commission on Allied Health Education (NCAHE) for the dietetic profession and dietetic education.

This questionnaire is divided into two parts. In Part I, you will be asked to evaluate the NCAHE recommendations with respect to appropriate priorities for the dietetic profession and dietetic education. Part II includes demographic questions to assist us in analyzing the responses.

The NCAHE recommendations were categorized as primary recommendations and as corollaries by the Commission. The fifteen primary recommendations were offered as major policy guidelines; the corollaries were designed to recommend means for achieving the goals implicit in the primary recommendations.

In Part I, related corollaries are indented below their respective primary recommendations. We want your evaluation of each of the primary recommendations and each of the related corollaries regarding appropriateness and priority for our profession. The scale for evaluation is described on the next page.

Please read and evaluate each statement carefully. Although important to allied health education generally, some of the recommendations or corollaries may have less relevance for dietetics. Results of this study should provide data for development of future directions in dietetic education.

Thank you for your cooperation! If you have comments on the recommendations or specific revisions to suggest in the recommendations or corollaries, please include on a separate page and send to us with the questionnaire. Please return the completed questionnaire in the envelope provided to:

Dr. Allene G. Vaden  
Department of Dietetics, Restaurant  
and Institutional Management  
Justin Hall  
Kansas State University  
Manhattan, Kansas 66506

Part I: Please evaluate each of the modified primary recommendations and related corollaries of the National Commission on Allied Health Education (NCAHE) as to importance and timeliness for the dietetic profession and for dietetic education using the scale below. Circle the number that corresponds to your evaluation.

- (1) Essential recommendation for the dietetic profession and dietetic education, urgent priority for implementation  
 (2) Essential recommendation, but not an urgent priority for implementation  
 (3) Important recommendation and somewhat urgent  
 (4) Important recommendation, but not urgent  
 (5) Recommendation is not of major importance for dietetics at this time

Recommendations	Essential, urgent	Essential, not urgent	Important, somewhat urgent	Important, not urgent	Not important at this time
1. Alliance in service and education should be strengthened, based on an appreciation of the interdependence of all health occupations and an understanding of their roles, functions, and special contributions.	1	2	3	4	5
2. Education should be linked to practice through role delineations (i.e., through collaboration of practitioners and educators, roles and functions of dietitians and other members of the dietetic team should be defined, and competencies identified and translated into educational content).	1	2	3	4	5
2.1 ADA should consult with other allied health professions which have conducted role delineation studies and seek funds for role delineation studies of its own (i.e., beyond current efforts).	1	2	3	4	5
3. Dietetic education should prepare students who can meet standard performance objectives (competencies), and adapt to changing health service needs; flexibility in the methods of educational preparation should be encouraged.	1	2	3	4	5
3.1 To assure flexibility, students in dietetic education programs should be allowed significant opportunities for selection of courses in humanities, social sciences, and natural sciences, in keeping with the students' individual talents and interests for personal enrichment.	1	2	3	4	5
4. To meet new service demands, all dietetic education programs should include the study of: (a) human values, (b) illness prevention and health promotion methods, and (c) delivery systems, including roles and functions of health personnel, patients' rights, legal risks, cost effectiveness, and quality control.	1	2	3	4	5
5. In the future, new health service needs should be met, where possible, without establishing new occupations and programs; unnecessary expansion of entry-level requirements should be controlled (e.g., M.S. required for dietetic practice).	1	2	3	4	5
5.1 Accreditation of dietetic education programs should be linked to justification of the level and length of programs based on competencies needed and utilized in the delivery of services.	1	2	3	4	5
5.2 ADA should support the premise that registration and reregistration should be based on validated role delineations and definitions.	1	2	3	4	5
5.3 Research to improve the methodology of performance-based testing should be supported.	1	2	3	4	5

Recommendations	Essen- tial, urgent	Essen- tial, not urgent	Import- ant, some- what urgent	Import- ant, not urgent	Not import- ant at this time
6. The importance of continuing education should be recognized and networks should be established to ensure collaboration and information sharing on continuing education matters.	1	2	3	4	5
6.1 ADA should participate in a National Coalition for Continuing Education for the provision of leadership and services at national, regional, and local levels. The function of the Coalition should include:					
(a) collective development of guidelines and principles for continuing education activities;					
(b) support services and technical assistance for establishing and publicizing local and regional interdisciplinary continuing education networks;					
(c) a clearinghouse for research on continuing education; and					
(d) information services to practitioners.	1	2	3	4	5
7. Clinical and didactic education should be better integrated, and the range and types of clinical education sites and methods should be expanded to meet new health service demands.	1	2	3	4	5
7.1 Educational institutions, which offer the didactic portion of a dietetic education program, should be responsible for the total education to ensure better integration of didactic and clinical education and sufficient breadth of clinical experiences; however, they must share the responsibility for planning, implementation, and evaluation with their clinical affiliates.	1	2	3	4	5
7.2 Educational institutions and clinical facilities should collaborate, or reevaluate current collaborative arrangements, to increase integration and improvement of clinical and didactic instruction through procedures such as: mechanisms to permit academic faculty to remain clinically current, and organized joint planning for the overall curriculum by clinical and academic faculty.	1	2	3	4	5
7.3 Formal degree programs as well as continuing education programs should be designed specifically to prepare faculty to plan, supervise, and evaluate clinical practice.	1	2	3	4	5
7.4 Dietetic education programs should use a broad array of clinical patterns and sites to enhance both the clinical practicum and future job placement of graduates.	1	2	3	4	5
7.5 Various methods of learning for clinical competence should be developed in sites other than patient health service facilities. These may include simulated clinical learning programs, programmed laboratory experiences, and other patient/client service areas.	1	2	3	4	5
8. Research in clinical education methods and theory must be greatly expanded.	1	2	3	4	5
8.1 Intensive research on methods of clinical education should be conducted, to include studies on:					
(a) identifying the types of professional learning which are most dependent on practical experiences,					
(b) validating or modifying existing standards for the amount and type of clinical experience required for program accreditation and/or practitioner certification, and					
(c) determining the relative cost-effectiveness of different patterns of clinical education.	1	2	3	4	5

Recommendations	Essen- tial, urgent	Essen- tial, not urgent	Impor- tant, some- what urgent	Impor- tant, not urgent	Not impor- tant at this time
9. The development of leadership in the clinical, managerial, and educational areas should be a priority for dietetic education.	1	2	3	4	5
9.1 ADA should encourage qualified universities to develop advanced programs for preparation of master clinicians which emphasize advanced clinical theory, methods of clinical research, and an advanced practicum.	1	2	3	4	5
9.2 Any process of credentialing master clinicians should focus on the competencies essential for practice and recognize that they may be gained through academic preparation and/or on-the-job experience.	1	2	3	4	5
9.3 Qualified universities and health service organizations should conduct carefully controlled studies of the effect of clinicians on the cost and effectiveness of nutritional care services.	1	2	3	4	5
9.4 Both clinical and academic faculty should increase their efforts to test the clinical theories they teach.	1	2	3	4	5
9.5 Educational institutions, professional organizations, employers, and others should initiate, provide, and/or support programs of continuing education to teach planning and management skills to dietetic personnel already in practice.	1	2	3	4	5
9.6 Programs to prepare dietetic education faculty should include each of the following (please rate a, b, and c separately):					
9.6a. advanced study in a subject matter area in dietetics	1	2	3	4	5
9.6b. preparation in professional education, including history and philosophy of higher education, instructional methods, and curriculum development and planning	1	2	3	4	5
9.6c. health care delivery and interdisciplinary processes.	1	2	3	4	5
10. Support for research in dietetic education should be substantially increased, and dietetic faculty should be encouraged to strengthen their commitment to research.	1	2	3	4	5
10.1 Administrators of dietetic education programs should regard scholarly activity as a necessary part of the total activities of faculty and take this into account in determining faculty needs, budgeting, selection, and promotion of faculty.	1	2	3	4	5
11. Dietetic education programs should strengthen their efforts to increase the representation of minorities in leadership positions.	1	2	3	4	5
12. The establishment, expansion, and termination of dietetic education programs should be based on manpower requirements, adequacy and efficient use of available resources, and collaboration within and among educational and other institutions.	1	2	3	4	5



Recommendations	Essen- tial, urgent	Essen- tial, not urgent	Import- ant, some- what urgent	Import- ant, not urgent	Not import- ant at this time
12.1 Before establishing new programs in dietetic education, institutions should be encouraged to cooperate with existing programs.	1	2	3	4	5
12.2 As a criterion for establishing and continuing programs, educational institutions must assure that adequate clinical affiliations are available, that students receive appropriate clinical practicum, and that sufficient funds to continue a new program through at least two completing classes are available.	1	2	3	4	5
12.3 For maximum use of existing institutional resources, dietetic or allied health students should receive instruction in the basic sciences through participation in general university courses rather than in special courses offered exclusively for dietetic and/or allied health majors.	1	2	3	4	5
13. Education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress (i.e., use of equivalency examinations for identifying objectives already attained, modularization of courses with waiver of portions that duplicate learned material, a more workable system for transfer of credits between institutions, etc.).	1	2	3	4	5
13.1 AOA should assume a leadership role in delineating career options in dietetics and in identifying ways of facilitating career advancement and change.	1	2	3	4	5
13.2 The Commission on Accreditation of The American Dietetic Association should examine their policies to determine if and how they may obstruct articulation between levels in the dietetic profession and between disciplines.	1	2	3	4	5
13.3 Directors of dietetic programs should establish links with local secondary school systems to inform students about dietetic careers and requirements of educational programs and to encourage participation in work experiences in health settings during the high school years.	1	2	3	4	5
13.4 Dietetic education programs, with the advice and counsel of professional associations and practitioners, should evaluate student selection procedures to determine whether more reliable indicators of probable academic success can be found and utilized.	1	2	3	4	5
13.5 Recruitment efforts to increase minority representation in dietetic education programs should be strengthened.	1	2	3	4	5
14. Information relating to administration and planning in dietetic education should be collected and shared systematically.	1	2	3	4	5
15. AOA should increase legislative activities and public policy efforts to convince federal, state, and local governments and private resources to provide adequate support for allied health education and manpower.	1	2	3	4	5

Please turn over and complete Part II.

## Part II: Demographic Information

Please provide the following information:

1. State where you reside:  
\_\_\_\_\_
2. Years of ADA membership:  
\_\_\_\_\_ years
3. Total years of dietetic practice since first becoming an ADA member (full and part-time):  
\_\_\_\_\_ years
4. Please indicate your level of education.  
☐ (1) Bachelor's  
☐ (2) Graduate work, degree not complete  
☐ (3) Master's degree  
☐ (4) Doctoral work, degree not complete  
☐ (5) Doctorate
5. What was your route to ADA membership?  
☐ (1) Dietetic internship  
☐ (2) Coordinated undergraduate program  
☐ (3) Combined dietetic internship-master's degree program  
☐ (4) Master's degree with experience or assistantship  
☐ (5) Doctoral degree  
☐ (6) Dietetic traineeship  
☐ (7) Bachelor's degree with experience  
☐ (8) Other, please specify:  
 \_\_\_\_\_
6. Registration status:  
☐ (1) Registered (R.D.)  
☐ (2) Non-registered
7. Please indicate the number of years you have contributed in the following ways to ADA at the district, state, and/or national levels:  
No. years  
☐ (1) district committees  
☐ (2) state committees  
☐ (3) district offices  
☐ (4) state offices  
☐ (5) national committees  
☐ (6) national offices
8. Indicate current employment status:  
☐ (1) not employed  
☐ (2) employed part-time (less than 30 hrs. per week)  
☐ (3) employed full-time
9. Indicate which of the following best describes your present position title(s); indicate more than one if you are employed by two or more organizations:  
☐ (1) Director  
☐ (2) Associate or Assistant Director or Head of administrative services  
☐ (3) Associate or Assistant Director or Head of clinical services  
☐ (4) Administrative staff dietitian  
☐ (5) Clinical staff dietitian  
☐ (6) Generalist (administrative, clinical and teaching responsibilities)  
☐ (7) Research dietitian  
☐ (8) Internship director  
☐ (9) Coordinated program director  
☐ (10) College or university faculty  
☐ (11) Private practice--Nutrition counseling  
☐ (12) Health Care Facility Consultant  
☐ (13) Public Health or Community Nutritionist  
☐ (14) Other, please specify (if none of the above describe your present position):  
 \_\_\_\_\_
10. Indicate which of the following best describes your present primary employer:  
☐ (1) Not applicable, self employed  
☐ (2) Hospital or University Medical Center  
☐ (3) Nursing Home  
☐ (4) College or University  
☐ (5) Government Agency, federal, state, or local  
☐ (6) Other non-profit agency, non-governmental  
☐ (7) Business/Industry  
☐ (8) Other, please specify:  
 \_\_\_\_\_

APPENDIX D  
Correspondence for Distribution of  
Survey Instrument

(KSU Letterhead)

June 2, 1980

Dear Colleague:

In November, 1979, the National Commission on Allied Health Education (NCAHE) completed a two year study of allied health education. After examining developments within the past ten years, the Commission proposed a series of recommendations to serve as guidelines for future developments in allied health education.

We are conducting this study to assess implications of these NCAHE recommendations for dietetic education. Since dietetics is considered among the allied health occupations, it is essential that these recommendations be examined to provide priority directions for our profession.

The recommendations selected for incorporation into the questionnaire were modified somewhat to make them directly relevant to dietetics. To insure that the original intent of the recommendations had not been altered, we asked three of the original members of the National Commission on Allied Health Education (NCAHE) to review them for verification. Dr. Frank Dickey, Commission Chairman, Dr. Engin Holmstrom, the Study Director, and Dr. William Knisely, committee member and member of The American Dietetic Association advisory board, approved and modified recommendations for incorporation into the questionnaire. Dr. Knisely, who is President of the Medical University of South Carolina, also was a member of the Millis Commission which conducted a study of the dietetic profession in 1972.

Leaders at national and state levels of The American Dietetic Association, dietetic educators, and a random sample of practitioners are being asked to participate in the study. This cross-section of dietitians should give a broad range of viewpoints in assessing the recommendations for future directions in dietetic education.

We sincerely hope that you will take the time to complete the survey and return your response in the enclosed stamped envelope within one week; however, your participation is strictly voluntary. It is not necessary for you to identify yourself or your organization. All answers will be kept confidential. An identification number has been used to assist us in followups; however, you will not be linked individually with your responses.

The success of the study depends upon the response of the participants--we need your help! You were selected because we believe you can give an informed opinion valuable to the purposes of the study. Thank you for your cooperation and time in answering the questionnaire.

Sincerely,

Judith M. Turcotte, R.D.  
Graduate Student

Allene G. Vaden, Ph.D., R.D.  
Associate Professor of Dietetics,  
Restaurant, and Institutional  
Management

ns

## (KSU Letterhead)

June 20, 1980

Dear Colleague:

Recently, we mailed a questionnaire to you entitled "National Commission on Allied Education: Implications for Dietetic Education." In the event that you did not receive the questionnaire, let us briefly review the objective of the study for you.

In November, 1979, the National Commission on Allied Health Education (NCAHE) completed a two year study of allied health education. After examining developments within the past ten years, the Commission proposed a series of recommendations to serve as guidelines for future developments in allied health education.

We are conducting this study to assess implications of these NCAHE recommendations for dietetic education. Since dietetics is considered among the allied health occupations, it is essential that these recommendations be examined to provide priority directions for our profession.

We hope that you will assist us in the study by completing the questionnaire and returning it in the enclosed stamped envelope. Your participation is strictly voluntary, however. It is not necessary for you to identify yourself or your organization. All answers will be kept confidential. An identification number has been used to assist us in followup; however, you will not be linked individually with your responses.

Your response will help to make this study a success! We hope that you will take the time to complete the questionnaire and we sincerely appreciate your participation in the study.

Sincerely,

Judith M. Turcotte, R.D.  
Graduate Student

Allene G. Vaden, Ph.D., R.D.  
Associate Professor of Dietetics,  
Restaurant and Institutional  
Management

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APPENDIX E  
Supplemental Tables  
(Tables 13-15)

Table 13: Recommendations of NCAHE adapted for survey instrument

recommendation no. in survey instrument	NCAHE recommendation no. <sup>1</sup>	recommendation no. in survey instrument	NCAHE recommendation no.
1	1	9	9
2	2	9.1	9.1 <sup>2</sup>
2.1	2.1	9.2 }	
3	3	9.3	9.2
3.1	3.3	9.4 }	
4	4	9.5	9.4
5	5	9.6a,b,c	9.5
5.1	5.2	10	10
5.2	5.3	10.1	10.1
5.3	5.4	11	11
6	6	12	12
6.1	6.1	12.1	12.1
7	7	12.2	12.4
7.1	7.1	12.3	12.6
7.2	7.3	13	13
7.3	7.4	13.1	13.5
7.4	7.5	13.2	13.6
7.5	7.6	13.3	13.8
8	8	13.4	13.9
8.1	8.1	13.5	13.10
		14	14
		15	15

<sup>1</sup>Refer to Appendix A for text of NCAHE recommendations; items in survey were adapted from the NCAHE recommendations indicated. NCAHE corollaries not referenced were considered not relevant to dietetics and were not included in the survey.

<sup>2</sup>Recommendations 9.1 and 9.2 were divided into two items for the survey instrument.



Table 14: Percentage distribution of responses on NCAHE recommendations of various groups in sample

recommendation <sup>1</sup>	response category	groups <sup>2</sup>							practitioners	$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.			
1.	Alliance in service and education should be strengthened.	32.2	35.9	47.4	41.9	37.2	34.5	39.8	24.4	
	essen., urgent	28.8	23.1	35.9	23.3	25.6	27.6	32.2		
	essen., not urgent	27.1	35.9	11.5	20.9	23.3	31.0	16.1		
	imp., some urgency	10.2	5.1	5.1	14.0	14.0	6.9	11.0		
	imp., not urgent	1.7	--	--	--	--	--	--		
	not imp.									
2.	Education should be linked to practice through role delineations.	77.6	61.5	81.0	65.9	69.6	65.5	49.2	37.9*	
	essen., urgent	6.9	23.1	13.9	20.5	17.4	24.1	30.8		
	essen., not urgent	8.6	10.3	2.5	6.8	8.7	6.9	15.8		
	imp., some urgency	5.2	5.1	2.5	6.8	4.3	3.4	3.3		
	imp., not urgent	1.7	--	--	--	--	--	0.8		
	not imp.									
2.1.	ADA should conduct role delineation studies beyond current efforts.	55.9	30.8	45.7	53.5	60.0	51.7	21.0	57.6*	
	essen., urgent	28.8	43.6	23.5	16.3	13.3	24.1	36.1		
	essen., not urgent	1.7	15.4	22.2	14.0	17.8	13.8	24.4		
	imp., some urgency	6.8	7.7	7.4	9.3	6.7	10.3	13.4		
	imp., not urgent	6.8	2.6	1.2	7.0	2.2	--	5.0		
	not imp.									

<sup>1</sup>Abbreviated version; refer to Table 6 for full text of recommendations.<sup>2</sup>Refer to Table 1 for sizes and definition of groups.\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups							practi- tioners	$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.			
								%		
3.	Methods of dietetic education should be flexible and prepare students who are competent and adaptable.	65.5	56.4	66.7	75.6	78.3	69.0	52.9	26.3	
	essen., urgent	22.4	33.3	23.5	22.2	15.2	20.7	28.1		
	essen., not urgent	8.6	7.7	6.2	2.2	6.5	10.3	11.6		
	imp., some urgency	1.7	--	3.7	--	--	--	5.0		
	imp., not urgent	1.7	2.6	--	--	--	--	2.5		
	not imp.									
3.1.	Programs should include significant liberal-general education.	10.2	20.5	17.3	24.4	15.2	17.2	26.4	25.8	
	essen., urgent	40.7	35.9	23.5	28.9	32.6	27.6	23.1		
	essen., not urgent	27.1	15.4	30.9	22.2	30.4	34.5	18.2		
	imp., some urgency	15.3	23.1	23.5	20.0	15.2	20.7	23.1		
	imp., not urgent	6.8	5.1	4.9	4.4	6.5	--	9.1		
	not imp.									
4.	Programs should include the study of human values, illness prevention, and delivery systems.	52.5	59.0	67.5	57.8	63.0	55.2	60.3	18.5	
	essen., urgent	28.8	23.1	18.8	28.9	17.4	24.1	19.0		
	essen., not urgent	10.2	12.8	12.5	13.3	17.4	13.8	15.7		
	imp., some urgency	6.8	5.1	--	--	--	3.4	3.3		
	imp., not urgent	1.7	--	1.3	--	2.2	3.4	1.7		
	not imp.									
5.	Expansion of new occupations, programs, and entry level requirements should be controlled.	37.3	25.6	38.3	43.2	42.2	39.3	38.3	30.0	
	essen., urgent	33.9	46.2	29.6	18.2	15.6	21.4	18.3		
	essen., not urgent	15.3	12.8	22.2	20.5	24.4	14.3	20.8		
	imp., some urgency	5.1	12.8	6.2	6.8	8.9	17.9	13.3		
	imp., not urgent	8.5	2.6	3.7	11.4	8.9	7.1	9.2		
	not imp.									

Table 14: (cont.)

recommendation	response category	groups											practitioners	DT	intern	CUP	house dele.	state pres.	natl. gov.	%	DT	practitioners	$\chi^2$																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
5.1. Accreditation of dietetic education programs should be linked to justification.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen., not urgent	imp., some urgency	imp., not urgent	not imp.	essen., urgent	essen.,

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$	
		natl. gov.	state pres.	house dele.	CUP		intern dir.	DT dir.		practitioners
					dir.	%				
6.1. ADA should participate in a National Coalition for Continuing Education for the provision of leadership and services at all levels.	essen., urgent	17.2	23.1	32.1	26.7	21.7	14.3	26.3	25.8	
	essen., not urgent	37.9	30.8	24.7	22.2	28.3	39.3	27.1		
	imp., some urgent	24.1	30.8	29.6	22.2	21.7	25.0	32.2		
	imp., not urgent	19.0	10.3	12.3	20.0	23.9	21.4	12.7		
	not imp.	1.7	5.1	1.2	8.9	4.3	--	1.7		
7. Clinical and didactic education should be better integrated; sites and methods of clinical education should be expanded.	essen., urgent	52.5	55.3	53.8	40.0	28.3	51.9	41.7	32.0	
	essen., not urgent	18.6	23.7	28.8	31.1	28.3	25.9	32.5		
	imp., some urgent	13.6	15.8	13.8	22.2	34.8	11.1	21.7		
	imp., not urgent	11.9	5.3	2.5	2.2	6.5	7.4	3.3		
	not imp.	3.4	--	1.3	4.4	2.2	3.7	0.8		
7.1. Educational institutions should be responsible for dietetic education with planning, implementation, and evaluation responsibilities shared with clinical affiliates.	essen., urgent	51.8	38.5	43.8	44.4	25.0	39.3	33.9	40.7*	
	essen., not urgent	16.1	35.9	25.0	22.2	17.5	25.0	27.3		
	imp., some urgent	7.1	20.5	15.0	13.3	22.5	14.3	27.3		
	imp., not urgent	8.9	--	7.5	11.1	10.0	10.7	5.8		
	not imp.	16.1	5.1	8.8	8.9	25.0	10.7	5.8		

\*  $P < .05$

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
7.2. Educational institutions and clinical facilities should collaborate to increase integration and improvement of clinical and didactic instruction.	essen., urgent	53.4	59.0	61.7	43.2	32.6	48.3	43.0	32.7
	essen., not urgent	29.3	30.8	22.2	34.1	39.1	31.0	28.1	
	imp., some urgency	8.6	10.3	13.6	18.2	17.4	13.8	19.8	
	imp., not urgent	5.2	--	2.5	2.3	4.3	6.9	8.3	
	not imp.	3.4	--	--	2.3	6.5	--	0.8	
7.3. Formal degree and continuing education programs should be designed for better preparation of faculty.	essen., urgent	24.6	33.3	27.5	28.9	34.1	25.0	29.7	18.1
	essen., not urgent	35.1	30.8	28.8	22.2	22.7	35.7	22.0	
	imp., some urgency	31.6	20.5	27.5	28.9	29.5	21.4	22.9	
	imp., not urgent	7.0	12.8	8.8	13.3	9.1	10.7	19.5	
	not imp.	1.8	2.6	7.5	6.7	4.5	7.1	5.9	
7.4. A broad array of clinical patterns and sites should be used.	essen., urgent	35.6	56.4	39.2	42.2	26.1	48.3	35.8	27.3
	essen., not urgent	33.9	20.5	29.1	28.9	32.6	37.9	28.3	
	imp., some urgency	20.3	12.8	26.6	15.6	30.4	6.9	26.7	
	imp., not urgent	10.2	5.1	5.1	8.9	6.5	6.9	7.5	
	not imp.	--	5.1	--	4.4	4.3	--	1.7	

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
									%
7.5. Various methods of learning for clinical competence should be developed in sites other than patient health service facilities.	essen., urgent	25.9	28.2	22.2	37.8	8.7	37.9	20.0	49.4*
	essen., not urgent	43.1	28.2	28.4	13.3	23.9	48.3	30.8	
	imp., some urgency	22.4	15.4	23.5	24.4	32.6	10.3	22.5	
	imp., not urgent	6.9	23.1	21.0	20.0	19.6	3.4	15.8	
	not imp.	1.7	5.1	4.9	4.4	15.2	--	10.8	
8. Research in clinical education methods and theory must be greatly expanded.	essen., urgent	43.9	32.4	21.1	41.9	19.5	33.3	20.7	39.6*
	essen., not urgent	26.3	29.7	27.6	20.9	31.7	37.0	22.4	
	imp., some urgency	17.5	21.6	35.5	18.6	26.8	14.8	27.6	
	imp., not urgent	10.5	16.2	15.8	18.6	17.1	14.8	22.4	
	not imp.	1.8	--	--	--	4.9	--	6.9	
8.1. Research is needed on extent of clinical experiences needed.	essen., urgent	49.1	25.6	29.6	40.0	31.1	37.9	18.2	38.2*
	essen., not urgent	24.6	46.2	30.9	22.2	31.1	31.0	33.1	
	imp., some urgency	17.5	20.5	30.9	20.0	22.2	27.6	28.1	
	imp., not urgent	8.8	5.1	8.6	15.6	11.1	3.4	15.7	
	not imp.	--	2.6	--	2.2	4.4	--	5.0	
9. Development of leadership should be a priority for dietetic education.	essen., urgent	66.1	51.3	64.2	54.5	47.8	48.3	50.0	36.1*
	essen., not urgent	17.9	28.2	17.3	20.5	21.7	27.6	23.3	
	imp., some urgency	10.7	7.7	13.6	22.7	26.1	17.2	23.3	
	imp., not urgent	5.4	12.8	4.9	--	--	6.9	2.5	
	not imp.	--	--	--	2.3	4.3	--	0.8	

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
					%				
9.1. ADA should encourage qualified universities to develop advanced programs for preparation of master clinicians.	essen., urgent essen., not urgent imp., some urgency imp., not urgent not imp.	35.1 26.3 26.3 10.5 1.8	20.5 48.7 17.9 12.8 --	31.3 31.3 21.3 15.0 1.3	43.2 29.5 15.9 4.5 6.8	17.4 30.4 26.1 10.9 15.2	20.7 27.6 31.0 17.2 3.4	25.8 31.7 24.2 14.2 4.2	36.7*
9.2. Any process of credentialing master clinicians should focus on the competencies essential for practice.	essen., urgent essen., not urgent imp., some urgency imp., not urgent not imp.	28.8 30.5 23.7 13.6 3.4	20.5 48.7 12.8 12.8 5.1	34.2 32.9 20.3 11.4 1.3	22.7 40.9 27.3 4.5 4.5	21.7 21.7 30.4 13.0 13.0	31.0 31.0 20.7 13.8 3.4	32.5 30.8 19.2 13.3 4.2	25.7
9.3. Studies of the effect of clinicians on the cost and effectiveness of nutritional care services should be conducted.	essen., urgent essen., not urgent imp., some urgency imp., not urgent not imp.	52.5 18.6 22.0 5.1 1.7	46.2 25.6 20.5 7.7 --	56.8 19.8 18.5 3.7 1.2	46.7 15.6 28.9 6.7 2.2	45.7 26.1 15.2 10.9 2.2	31.0 37.9 20.7 10.3 --	35.5 21.5 22.3 17.4 3.3	29.6
9.4. Clinical and academic faculty should increase efforts to test clinical theories.	essen., urgent essen., not urgent imp., some urgency imp., not urgent not imp.	35.6 32.2 28.8 1.7 1.7	33.3 35.9 17.9 10.3 2.6	49.4 30.9 12.3 7.4 --	40.0 26.7 20.0 13.3 --	26.7 40.0 22.2 6.7 4.4	31.0 34.5 13.8 20.7 --	40.8 24.2 22.5 10.8 1.7	29.5

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups								$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners		
									%	
9.5. Educational institutions and others should provide continuing education programs to teach planning and management skills to practitioners.	essen., urgent	61.0	51.3	58.0	40.9	50.0	35.7	53.7	31.5	
	essen., not urgent	13.6	25.6	21.0	18.2	28.3	21.4	23.1		
	imp., some urgency	18.6	15.4	13.6	29.5	21.7	35.7	16.5		
	imp., not urgent	5.1	7.7	7.4	6.8	--	7.1	6.6		
	not imp.	1.7	--	--	4.5	--	--	--		
9.6a. Programs for dietetic education faculty should include advanced study in a subject matter area in dietetics.	essen., urgent	45.8	43.6	48.1	53.3	43.5	44.8	37.5	21.7	
	essen., not urgent	30.5	38.5	28.4	24.4	28.3	27.6	32.5		
	imp., some urgency	15.3	12.8	17.3	11.1	15.2	13.8	17.5		
	imp., not urgent	8.5	5.1	6.2	4.4	8.7	10.3	11.7		
	not imp.	--	--	--	6.7	4.3	3.4	0.8		
9.6b. Programs to prepare dietetic education faculty should include preparation in professional education.	essen., urgent	35.6	23.1	29.6	35.6	39.1	27.6	25.8	22.9	
	essen., not urgent	25.4	35.9	32.1	15.6	23.9	41.4	23.3		
	imp., some urgency	18.6	20.5	22.2	22.2	23.9	20.7	21.7		
	imp., not urgent	18.6	17.9	13.6	20.0	8.7	10.3	21.7		
	not imp.	1.7	2.6	2.5	6.7	4.3	--	7.5		



Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
					%				
9.6c. Programs to prepare dietetic education faculty should include health care delivery and interdisciplinary processes.	essen., urgent	42.4	41.0	55.6	37.8	34.8	10.3	42.5	36.9*
	essen., not urgent	27.1	35.9	21.0	28.9	32.6	51.7	28.3	
	imp., some urgency	15.3	12.8	19.8	26.7	21.7	27.6	17.5	
	imp., not urgent	15.3	10.3	3.7	4.4	6.5	10.3	10.0	
	not imp.	--	--	--	2.2	4.3	--	1.7	
10. Support for research in dietetic education should be increased; dietetic faculty should strengthen commitment to research.	essen., urgent	33.9	17.9	19.8	38.6	21.7	10.3	20.8	41.7*
	essen., not urgent	25.4	35.9	29.6	31.8	19.6	24.1	26.7	
	imp., some urgency	25.4	12.8	32.1	15.9	41.3	51.7	23.3	
	imp., not urgent	13.6	28.2	14.8	11.4	15.2	10.3	20.8	
	not imp.	1.7	5.1	3.7	2.3	2.2	3.4	8.3	
10.1. Administrators of dietetic education programs should assess scholarly activity in determining faculty and fiscal needs.	essen., urgent	29.3	23.1	22.2	45.5	41.3	34.5	27.3	29.7
	essen., not urgent	34.5	25.6	32.1	29.5	21.7	31.0	34.7	
	imp., some urgency	19.0	17.9	32.1	15.9	21.7	20.7	22.3	
	imp., not urgent	15.5	28.2	9.9	6.8	8.7	6.9	10.7	
	not imp.	1.7	5.1	3.7	2.3	6.5	6.9	5.0	

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
					%				
11. Dietetic education programs should increase the representation of minorities in leadership positions.	essen., urgent	8.5	2.6	16.0	17.8	15.2	24.1	13.3	36.7*
	essen., not urgent	25.4	20.5	11.1	15.6	13.0	31.0	16.7	
	imp., some urgent	22.0	20.5	30.9	33.3	32.6	20.7	20.8	
	imp., not urgent	22.0	35.9	27.2	28.9	15.2	13.8	24.2	
	not imp.	22.0	20.5	14.8	4.4	23.9	10.3	25.0	
12. Manpower requirements, adequacy of resources, and effective collaboration should be considered in establishment and termination of programs.	essen., urgent	29.8	42.1	46.9	26.7	51.1	34.5	37.2	31.8
	essen., not urgent	24.6	28.9	21.0	20.0	26.7	24.1	19.8	
	imp., some urgent	26.3	7.9	24.7	28.9	15.6	20.7	28.9	
	imp., not urgent	14.0	21.1	7.4	17.8	6.7	17.2	11.6	
	not imp.	5.3	--	--	6.7	--	3.4	2.5	
12.1. Before establishing new programs in dietetic education, institutions should cooperate with existing programs.	essen., urgent	55.9	46.2	58.0	38.6	41.3	65.5	53.7	28.3
	essen., not urgent	15.3	28.2	17.3	15.9	17.4	20.7	20.7	
	imp., some urgent	20.3	20.5	16.0	20.5	19.6	6.9	16.5	
	imp., not urgent	3.4	2.6	7.4	13.6	13.0	3.4	6.6	
	not imp.	5.1	2.6	1.2	11.4	8.7	3.4	2.5	

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	natl. gov.	state pres.	house dele.	groups				DT dir.	practitioners	$\chi^2$
					CUP dir.	intern dir.	%				
12.2. Establishment and continuation of programs should be based on availability of clinical affiliations, funds, and adequacy of clinical practicum.	essen., urgent essen., not urgent imp., some urgent imp., not urgent not imp.	63.8 24.1 5.2 3.4 3.4	53.8 35.9 7.7 2.6 --	79.0 12.3 6.2 1.2 1.2	73.3 8.9 13.3 4.4 --	63.0 23.9 8.7 4.3 --			62.1 34.5 -- -- 3.4	71.1 15.7 9.1 3.3 0.8	31.8
12.3. Dietetic students should receive instruction in basic sciences through participation in general university courses.	essen., urgent essen., not urgent imp., some urgent imp., not urgent not imp.	49.2 27.1 5.1 8.5 10.2	17.9 28.2 20.5 17.9 15.4	56.8 14.8 9.9 12.3 6.2	55.6 13.3 6.7 15.6 8.9	39.1 23.9 21.7 8.7 6.5			34.5 31.0 10.3 10.3 13.8	45.0 22.5 16.7 5.8 10.0	37.6*
13. Education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress.	essen., urgent essen., not urgent imp., some urgent imp., not urgent not imp.	39.0 35.6 13.6 10.2 1.7	23.7 23.7 42.1 7.9 2.6	35.0 22.5 31.3 8.8 2.5	35.6 22.2 28.9 8.9 4.4	33.3 35.6 20.0 8.9 2.2			65.5 27.6 6.9 -- --	40.5 23.1 19.8 12.4 4.1	34.7

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups								$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners		
									%	
13.1. ADA should assume leadership in identifying options, career advancement and change.	essen., urgent	54.2	35.9	41.3	42.2	39.1	55.2	49.6	34.7	
	essen., not urgent	23.7	17.9	30.0	31.1	30.4	31.0	16.5		
	imp., some urgency	10.2	35.9	18.8	8.9	17.4	6.9	18.2		
	imp., not urgent	11.9	10.3	8.8	15.6	6.5	6.9	12.4		
	not imp.	--	--	1.3	2.2	6.5	--	3.3		
13.2. The ADA accreditation commission should examine policies to determine if they obstruct articulation.	essen., urgent	49.1	30.8	40.5	46.7	44.2	62.1	37.3	22.6	
	essen., not urgent	20.0	17.9	27.8	15.6	23.3	24.1	25.4		
	imp., some urgency	21.8	35.9	17.7	22.2	16.3	10.3	22.9		
	imp., not urgent	3.6	12.8	8.9	8.9	9.3	--	11.0		
	not imp.	5.5	2.6	5.1	6.7	7.0	3.4	3.4		
13.3. Directors of dietetic programs should establish links with local secondary school systems to inform students about dietetic careers.	essen., urgent	8.6	25.6	19.8	22.2	15.2	48.3	29.2	40.8*	
	essen., not urgent	25.9	17.9	12.3	17.8	8.7	20.7	20.8		
	imp., some urgency	27.6	17.9	33.3	20.0	23.9	17.2	22.5		
	imp., not urgent	29.3	28.2	23.5	28.9	32.6	13.8	20.0		
	not imp.	8.6	10.3	11.1	11.1	19.6	--	7.5		

\*  $P \leq .05$

Table 14: (cont.)

recommendation	response category	groups							$\chi^2$
		natl. gov.	state pres.	house dele.	CUP dir.	intern dir.	DT dir.	practitioners	
		%							
13.4. Dietetic education programs should evaluate student selection procedures to identify more reliable indicators of academic success.	essen., urgent	23.7	30.8	33.3	28.9	50.0	28.6	21.7	31.6
	essen., not urgent	35.6	23.1	23.5	22.2	17.4	28.6	17.5	
	imp., some urgency	20.3	25.6	24.7	22.2	15.2	28.6	31.7	
	imp., not urgent	13.6	12.8	17.3	20.0	15.2	14.3	20.8	
	not imp.	6.8	7.7	1.2	6.7	2.2	--	8.3	
13.5. Minority representation in dietetic education programs should be strengthened.	essen., urgent	5.1	5.1	13.8	22.2	19.6	20.7	12.6	36.3*
	essen., not urgent	23.7	7.7	13.8	20.0	19.6	34.5	14.3	
	imp., some urgency	25.4	33.3	28.8	28.9	21.7	27.6	24.4	
	imp., not urgent	25.4	38.5	31.3	22.2	19.6	17.2	30.3	
	not imp.	20.3	15.4	12.5	6.7	19.6	--	18.5	
14. Information relating to administration and planning in dietetic education should be collected and shared systematically.	essen., urgent	30.5	23.1	31.3	24.4	33.3	37.9	28.3	12.7
	essen., not urgent	23.7	20.5	28.8	31.1	26.7	27.6	28.3	
	imp., some urgency	22.0	35.9	26.3	24.4	26.7	27.6	28.3	
	imp., not urgent	20.3	20.5	12.5	17.8	11.1	6.9	14.2	
	not imp.	3.4	--	1.3	2.2	2.2	--	0.8	

\*  $P < .05$



Table 15: Mean percentage responses of ratings on NCAHE recommendations

recommendation <sup>1</sup>	response category	percentage of responses <sup>2</sup>	
		group mean	weighted mean
		%	%
1. Alliance in service and education should be strengthened.	essen., urgent	38	39
	essen., not urgent	28	30
	imp., some urgency	24	21
	imp., not urgent	9	10
	not imp.	--	--
2. Education should be linked to practice through role delineations.	essen., urgent	67	66
	essen., not urgent	20	20
	imp., some urgency	9	9
	imp., not urgent	4	4
	not imp.	--	--
2.1. ADA should conduct role delineation studies beyond current efforts.	essen., urgent	46	41
	essen., not urgent	27	28
	imp., some urgency	16	17
	imp., not urgent	9	9
	not imp.	4	4
3. Methods of dietetic education should be flexible and prepare students who are competent and adaptable.	essen., urgent	66	64
	essen., not urgent	24	24
	imp., some urgency	8	8
	imp., not urgent	1	2
	not imp.	1	1
3.1. Programs should include significant liberal-general education.	essen., urgent	19	20
	essen., not urgent	30	29
	imp., some urgency	26	25
	imp., not urgent	20	21
	not imp.	5	6
4. Programs should include the study of human values, illness prevention, and health delivery systems.	essen., urgent	59	60
	essen., not urgent	23	22
	imp., some urgency	14	14
	imp., not urgent	3	3
	not imp.	1	1

<sup>1</sup>Abbreviated versions; refer to Table 6 for full text of recommendations.

<sup>2</sup>Refer to Tables 1 and 6 for explanation of groups and computation of means.

Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
5. Expansion of new occupations, programs, and entry level requirements should be controlled.	essen., urgent	38	38
	essen., not urgent	26	25
	imp., some urgency	19	19
	imp., not urgent	10	10
	not imp.	7	7
5.1. Accreditation of dietetic education programs should be linked to justification.	essen., urgent	35	34
	essen., not urgent	33	33
	imp., some urgency	20	20
	imp., not urgent	10	10
	not imp.	3	3
5.2. Registration should be based on validated role delineations and definitions.	essen., urgent	25	23
	essen., not urgent	29	29
	imp., some urgency	25	26
	imp., not urgent	12	12
	not imp.	9	9
5.3. Research to improve the methodology for performance-based testing should be supported.	essen., urgent	34	30
	essen., not urgent	25	23
	imp., some urgency	23	26
	imp., not urgent	14	15
	not imp.	4	5
6. Networks should be established to ensure information sharing on continuing education matters.	essen., urgent	35	37
	essen., not urgent	32	32
	imp., some urgency	21	21
	imp., not urgent	12	11
	not imp.	2	1
6.1. ADA should participate in a National Coalition for Continuing Education for the provision of leadership and services at all levels.	essen., urgent	23	24
	essen., not urgent	30	29
	imp., some urgency	27	28
	imp., not urgent	17	16
	not imp.	3	3
7. Clinical and didactic education should be better integrated; sites and methods of clinical education should be expanded.	essen., urgent	46	46
	essen., not urgent	27	28
	imp., some urgency	19	19
	imp., not urgent	6	5
	not imp.	2	2



Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
7.1. Educational institutions should be responsible for dietetic education with planning, implementation, and evaluation responsibilities shared with clinical affiliates.	essen., urgent	40	39
	essen., not urgent	24	24
	imp., some urgency	17	19
	imp., not urgent	8	7
	not imp.	11	11
7.2. Educational institutions and clinical facilities should collaborate to increase integration and improvement of clinical and didactic instruction.	essen., urgent	49	49
	essen., not urgent	30	29
	imp., some urgency	15	15
	imp., not urgent	4	5
	not imp.	2	2
7.3. Formal degree and continuing education programs should be designed for better preparation of faculty.	essen., urgent	29	29
	essen., not urgent	28	27
	imp., some urgency	26	26
	imp., not urgent	12	13
	not imp.	5	5
7.4. A broad array of clinical patterns and sites should be used.	essen., urgent	41	39
	essen., not urgent	30	39
	imp., some urgency	20	22
	imp., not urgent	7	7
	not imp.	2	2
7.5. Various methods of learning for clinical competence should be developed in sites other than patient health service facilities.	essen., urgent	26	24
	essen., not urgent	31	30
	imp., some urgency	22	22
	imp., not urgent	16	16
	not imp.	6	7
8. Research in clinical education methods and theory must be greatly expanded.	essen., urgent	30	29
	essen., not urgent	28	27
	imp., some urgency	23	25
	imp., not urgent	16	17
	not imp.	2	3

Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
8.1. Research is needed on extent of clinical experience needed.	essen., urgent	33	31
	essen., not urgent	31	31
	imp., some urgency	24	25
	imp., not urgent	10	11
	not imp.	2	2
9. Development of leadership should be a priority for dietetic education.	essen., urgent	55	55
	essen., not urgent	22	22
	imp., some urgency	17	18
	imp., not urgent	5	4
	not imp.	1	1
9.1. ADA should encourage qualified universities to develop advanced programs for preparation of master clinicians.	essen., urgent	28	28
	essen., not urgent	32	32
	imp., some urgency	23	23
	imp., not urgent	12	13
	not imp.	5	4
9.2. Any process of credentialing master clinicians should focus on the competencies essential for practice.	essen., urgent	27	29
	essen., not urgent	34	33
	imp., some urgency	22	22
	imp., not urgent	12	12
	not imp.	5	5
9.3. Studies of the effect of clinicians on the cost and effectiveness of nutritional care services should be conducted.	essen., urgent	45	45
	essen., not urgent	24	22
	imp., some urgency	21	21
	imp., not urgent	9	10
	not imp.	2	2
9.4. Clinical and academic faculty should increase efforts to test clinical theories.	essen., urgent	37	39
	essen., not urgent	32	30
	imp., some urgency	20	20
	imp., not urgent	10	9
	not imp.	1	1
9.5. Educational institutions and others should provide continuing education programs to teach planning and management skills to practitioners.	essen., urgent	50	52
	essen., not urgent	22	22
	imp., some urgency	22	19
	imp., not urgent	6	6
	not imp.	1	1

Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
9.6a. Programs for dietetic education faculty should include advanced study in a subject matter area in dietetics.	essen., urgent	45	44
	essen., not urgent	30	30
	imp., some urgency	15	16
	imp., not urgent	8	8
	not imp.	2	2
9.6b. Programs to prepare dietetic education faculty should include preparation in professional education.	essen., urgent	31	30
	essen., not urgent	28	27
	imp., some urgency	21	21
	imp., not urgent	16	17
	not imp.	4	4
9.6c. Programs to prepare dietetic education faculty should include health care delivery and interdisciplinary processes.	essen., urgent	38	41
	essen., not urgent	32	30
	imp., some urgency	20	19
	imp., not urgent	9	9
	not imp.	1	1
10. Support for research in dietetic education should be increased; dietetic faculty should strengthen commitment to research.	essen., urgent	23	23
	essen., not urgent	28	27
	imp., some urgency	29	28
	imp., not urgent	16	17
	not imp.	4	5
10.1. Administrators of dietetic education programs should assess scholarly activity in determining faculty and fiscal needs.	essen., urgent	32	30
	essen., not urgent	30	31
	imp., some urgency	21	22
	imp., not urgent	12	12
	not imp.	4	4
11. Dietetic education programs should increase the representation of minorities in leadership positions.	essen., urgent	14	14
	essen., not urgent	19	18
	imp., some urgency	26	25
	imp., not urgent	24	24
	not imp.	17	19

Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
12. Manpower requirements, adequacy of resources, and effective collaboration should be considered in establishment and termination of programs.	essen., urgent	38	39
	essen., not urgent	24	23
	imp., some urgency	22	24
	imp., not urgent	14	13
	not imp.	3	2
12.1. Before establishing new programs in dietetic education, institutions should cooperate with existing programs.	essen., urgent	51	52
	essen., not urgent	19	19
	imp., some urgency	17	17
	imp., not urgent	7	7
	not imp.	5	4
12.2. Establishment and continuation of programs should be based on availability of clinical affiliations, funds, and adequacy of clinical practicum.	essen., urgent	67	69
	essen., not urgent	22	20
	imp., some urgency	7	8
	imp., not urgent	3	3
	not imp.	1	1
12.3. Dietetic students should receive instruction in basic sciences through participation in general university courses.	essen., urgent	43	45
	essen., not urgent	23	22
	imp., some urgency	13	13
	imp., not urgent	11	10
	not imp.	10	10
13. Education and collaborating institutions should adopt mechanisms to facilitate the removal of unnecessary barriers to student progress.	essen., urgent	39	38
	essen., not urgent	27	26
	imp., some urgency	23	23
	imp., not urgent	8	9
	not imp.	3	3
13.1. ADA should assume leadership in identifying options, career advancement and change.	essen., urgent	45	46
	essen., not urgent	26	24
	imp., some urgency	17	17
	imp., not urgent	10	11
	not imp.	2	2

Table 15: (cont.)

recommendation	response category	percentage of responses	
		group mean	weighted mean
		%	%
13.2. The ADA accreditation commission should examine policies to determine if they obstruct articulation.	essen., urgent	44	42
	essen., not urgent	22	23
	imp., some urgency	21	21
	imp., not urgent	8	9
	not imp.	5	5
13.3. Directors of dietetic programs should establish links with local secondary school systems to inform students about dietetic careers.	essen., urgent	24	23
	essen., not urgent	18	18
	imp., some urgency	23	24
	imp., not urgent	25	25
	not imp.	10	10
13.4. Dietetic education programs should evaluate student selection procedures to identify more reliable indicators of academic success.	essen., urgent	31	29
	essen., not urgent	24	23
	imp., some urgency	24	25
	imp., not urgent	16	17
	not imp.	5	5
13.5. Minority representation in dietetic education programs should be strengthened.	essen., urgent	14	13
	essen., not urgent	19	18
	imp., some urgency	27	27
	imp., not urgent	26	28
	not imp.	13	15
14. Information relating to administration and planning in dietetic education should be collected and shared systematically.	essen., urgent	30	30
	essen., not urgent	27	27
	imp., some urgency	27	27
	imp., not urgent	15	15
	not imp.	1	1
15. ADA should increase legislative activities for support of allied health education and manpower.	essen., urgent	69	66
	essen., not urgent	14	15
	imp., some urgency	11	12
	imp., not urgent	5	5
	not imp.	1	1

RECOMMENDATIONS OF THE NATIONAL COMMISSION ON ALLIED  
HEALTH EDUCATION (NCAHE): PRIORITIES  
FOR THE DIETETIC PROFESSION

by

JUDITH MARIE TURCOTTE  
B.S., University of Idaho, 1972

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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

1981

## ABSTRACT

The National Commission on Allied Health Education (NCAHE) was formed in 1977 for the purpose of conducting a two year study on allied health education in the United States. The fifteen member Commission was charged with the responsibility of making recommendations in allied health education for the 1980's, based on assessment of the developments in the field during the past decade. After two years of studying and evaluating allied health education, the Commission proposed fifteen primary and sixty-three related corollary recommendations. Primary recommendations were formulated to provide major policy guidelines, while corollaries were intended to suggest means of attaining the goals implicit in the primary recommendations.

The Commission contended that the recommendations of general concern should be evaluated by many groups involved in allied health education. The objective of this research was to assess the importance and priority of each relevant recommendation of the National Commission on Allied Health Education for the dietetic profession and particularly, for dietetic education.

The sample for the study included members of the 1979-1980 governance groups and major committees of The American Dietetic Association (ADA), presidents of state dietetic associations, directors of dietetic internships and coordinated undergraduate programs, directors of approved dietetic technician programs, and a random sample of dietetic practitioners. The sample totalled 607 potential respondents. After initial and follow-up mailings, 71.9 per cent were returned (n = 437).

The instrument was developed and evaluated through two drafts, involving reviews by dietetic educators, an education evaluation specialist, the NCAHE study director, and two NCAHE commission members. The fifteen primary recommendations and twenty-nine corollaries proposed by the NCAHE were modified slightly by the research committee for relevance to the dietetic profession. The final questionnaire consisted of two parts. In Part I, participants were asked to evaluate the selected NCAHE recommendations with respect to appropriate priorities for dietetic education. A five point scale was used for assessment of the importance and timeliness of the primary recommendations and corollaries. Part II consisted of ten questions concerning demographic information to be used for analyzing responses and describing the sample.

Five categories were developed from the relative ordering of the recommendations based on essentiality-urgency ratings: most essential and urgent, moderately essential and urgent, somewhat essential and urgent, not as essential and urgent, or least essential and urgent. Three primary recommendations and one corollary were rated as "most essential and urgent." The recommendation regarding increased ADA legislative activities for support of allied health education and manpower was rated by the survey groups as the most essential and urgent recommendation. Also identified as "most essential and urgent" was the corollary concerned with the establishment and continuation of programs based on the availability of clinical affiliations, funds, and adequacy of clinical practicum. Two other highly rated primary recommendations were those on linking education to practice through role delineation and flexibility in dietetic education.



Chi square analysis was used to compare ratings of the recommendations among the survey groups. The survey groups were in agreement on ratings of twenty-seven of the forty-four NCAHE primary recommendations and corollaries. In the three categories of recommendations with the highest ratings for essentiality and urgency, thirteen of the eighteen recommendations were rated similarly by all groups, which suggests concurrence in the profession on the most essential issues in dietetic education.

Disagreements among the groups were observed on ratings of seventeen recommendations. Differences occurred most frequently on recommendations in the "not as essential and urgent" and "least essential and urgent" categories. When the group response deviated from the overall ratings, the national governance group and the directors of coordinated programs tended to regard recommendations as more essential and urgent. Conversely, the state presidents and the practitioners tended to give lower ratings.