This study was designed to establish a baseline of data regarding guidelines for curriculum development in the preparation of health education specialists in health-care delivery settings.

The survey method was utilized and an expert panel of 15 jurors was selected to respond to a 51 item questionnaire. Professions represented on the panel included seven directors of health education in health maintenance organizations and hospitals; two health educators; one education specialist and consultant; one university system field health education program supervisor; and one administrator of a health maintenance organization.

Committee members were asked to indicate desired academic proficiency levels on a five-point scale to 51 specific items grouped according to seven major subject
areas: (1) Education; (2) Behavioral Sciences; (3) Biological Sciences; (4) Organizational Processes and Management; (5) Communications; (6) Organization for Health; and (7) Health Sciences.

Results were tabulated, a weighted percentage was calculated for each item of the questionnaire, and a relative priority listing was made of the items within each of the seven subject areas. As a basis for determining the relative importance of each item the following arbitrarily assigned scale, referred to as the "Index of Importance", was applied to the weighted percentages: Very High Priority (90 to 100%); High Priority (80 to 89%); Moderate Priority (70 to 79%); Low Priority (60 to 69%); Very Low Priority (50 to 59%); and No Priority (0 to 49%).

Using the "Indices of Importance", three (5.9%) of the items were given a very high priority rating; nine (17.6%) a high priority rating; 20 (39.2%) a moderate priority rating; 16 (31.4%) a low priority rating; two (3.9%) a very low priority; and one item (2.0%) was given a no priority rating.

For analysis, a weighted percentage average was calculated to determine the relative importance of each subject matter area which ranked as follows: (1) Education (80.50%); (2) Organizational Processes and Management (76.00%); (3) Behavioral Sciences (75.33%); (4) Communications (75.33%); (5) Health Sciences (70.00%); (6) Organization for Health (65.68%); and (7) Biological Sciences (58.67%).
Based upon the priority ratings, those classified from high to very high, the greatest desired proficiency levels involve knowledge of: program implementation and management; written and oral communications; formulation of behavioral objectives; criteria for selection of health educational materials appropriate for particular individuals and/or groups; values and attitudes which influence health behavior; organizational theory and structure as it relates to the health-care delivery institutions; problem-solving methodology; theories of teaching and learning; theories of motivation; methodology for program evaluations; community organization and development; and basic organization and functions of the health-care delivery institution's departments and services.
GUIDELINES FOR CURRICULUM DEVELOPMENT IN
THE PREPARATION OF HEALTH EDUCATION SPECIALISTS
IN HEALTH-CARE DELIVERY SETTINGS

by

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GUIDELINES FOR CURRICULUM DEVELOPMENT IN THE PREPARATION OF HEATH EDUCATION SPECIALISTS IN HEALTH-CARE DELIVERY SETTINGS

I. INTRODUCTION

Until recently, health education of the public has been primarily the responsibility of official, voluntary, and allied health agencies. But today, there is an increasing demand for the development of formalized health education programs in health-care delivery settings such as hospitals, health maintenance organizations and clinics. As it relates to the delivery of health care, health education is a process that bridges the gap between health information and health practices. In the 1973 Final Report of the Joint Committee on Health Education Terminology the following definition was accepted:

A process with intellectual, psychological, and social dimensions relating to activities which increase the abilities of people to make informed decisions affecting their personal, family, and community well-being. This process, based on scientific principles, facilitates learning and behavioral change in both health personnel and consumers, including children and youth. (30, p.28)

Today, health education is being recognized as an integral part of the health-care delivery system. Increasingly, public health programs are becoming based in health-care delivery settings; as a result, both the community hospital and the health maintenance organization are emerging as centers for community health services of all types.
Well-organized health education programs commonly include the following four components: (1) public information; (2) consumer-enrollee education; (3) inpatient and outpatient education; and (4) orientation training, inservice training, and continuing education of institutional staff. The public information component has a concern for public relations and the mass media. It may be used to build special types of support and to provide generalized health information. The consumer-enrollee education component is concerned with assisting all consumer-enrollees to get maximum use of the system appropriate to their needs, providing education in prevention, and promoting health maintenance and self-care. The patient education component is concerned with mitigating the effects of disease and disability, enabling patients and their families to participate in decisions about managing long term or terminal illness, helping patients and their families to manage disease or disability, and supporting the goals of the health-care delivery system. Lastly, the orientation training, inservice training, and continuing education component has a concern to orient the professional staff to the hospital or health maintenance organization mode of practice, to develop communication skills of staff, to develop a staff of facilitators working to benefit the consumer-enrollee according to the contract between them, and to enhance the quality of care by up-dating staff knowledge and skills (21,34).
There is an increasing trend toward the employment of qualified health education specialists by hospitals, health maintenance organizations, and other direct health-care delivery systems to organize and develop educational programs integrated with health services (7,8,17,24,50,70,85). This trend is stimulated by a number of social forces among which are the consumer movement and federal legislation which requires that health education be an integral part of any health-service delivery financed by federal monies (44).

The President's Committee on Health Education was created by President Nixon in September 1971 to "recommend ways to develop in the general public a sense of health consumer citizenship which involves helping every American to learn how best to achieve and maintain a reasonable level of health" (44, p.66). Numerous federal committee reports of both the House and Senate stress patient independence through self-maintenance and self-care (43,56). The National Health Planning and Resources Development Act of 1974 specifies as one of its ten priorities the "development of effective methods of educating the general public concerning proper personal health care and methods available for effective use of health service" (74, p.16).

Further impetus has been given to the development of the patient education component of hospital health education programs by adoption of the Patient's Bill of Rights by the American Hospital Association's Board of Trustees (40). The
Patient's Bill of Rights clearly requires that information be provided to the patient in order that he may make an "informed consent" and that observance of these rights will contribute to more effective patient care and greater satisfaction for the patient, his physician, and the hospital organization. It is evident that this has important administrative, legal, and philosophical implications (40). Perhaps more important, however, are the plans by third party payers to provide for essential funds to expand the needed health education services in hospitals and to support personnel with education skills within hospitals (26, 29, 75, 77).

Over 100 hospitals throughout the country have developed comprehensive health education programs (76). Departments of health education staffed by qualified health education specialists have been organized in a noteworthy number of hospitals in the more populous states such as California (7,8,17,79). Similar programs are beginning to develop in hospitals in Oregon such as the Kaiser Hospital Foundation and the Adventist Hospital in Portland, the Bay Area Hospital in Coos Bay, and the Rogue Valley Hospital in Medford (12,19,20,21).

The development of formalized programs of health education in hospitals and other health-care delivery systems is a relatively new field for the health education specialist. In spite of the multifarious health education specialist training programs in existence today, a shortage of well-qualified health education specialists in health-care delivery
settings continues to persist \( (7, 18, 54, 60, 62, 81) \). Consequently, there is an urgent need to determine the fundamental areas of professional competence and unique skills which the health education specialist must acquire to assume leadership in the development, implementation, and evaluation of hospital-based health education programs.

**Origins of the Problem**

For many years health agencies have accepted health education and public health educators as part of their services. The same cannot be said for community hospitals or other health-care delivery systems. Even though in the last 30 years health professionals have increasingly acknowledged the value of the educational component in the delivery of health care services, and have conducted research in this area, only a few health-care delivery systems provide organized patient education programs \( (3) \).

The literature contains numerous accounts of the historical development and sporadic interests in patient education. It was the patient education demonstration projects and studies of the late 1940's and early 1950's, however, which provided the major impetus at the national level \( (3, 48, 50, 61, 72, 73) \). The Health Insurance Plan of Greater New York, one of the first prepaid health plans in the United States, added a health education specialist to its core staff prior to the start of services to the general population \( (58) \).
In the early 1950's interest in patient education as an organized part of a total care plan was sparked by a few health education specialists on the staff of the National Tuberculosis Association (61). With the advent of the Chronic Disease Program of the U.S. Public Health Service, and the availability of demonstration funds from the Hill Burton Hospital Survey and Construction Act of 1946, patient education projects began to appear (61,63,69).

In the early 1960's, voluntary agencies and the U.S. Public Health Service funded several patient and family education projects concerning cancer, congestive heart failure, stroke, and renal dialysis (5,61,69). In addition, hospitals in California, New Jersey, Connecticut, New York, Massachusetts, Indiana, and Minnesota became involved in various projects and programs (17,24,50,70). As the community hospital continues to assume a more central role in the total health care of the community, its educational role will change and expand. Therefore, there is a continuing need to educate health education specialists to understand and to implement the new and developing roles of patient education as an integral component of total patient care (50,80,85).

Today, health-care delivery systems are being challenged to improve their efficiency and effectiveness. Reforms in the system must forcefully address the need to contain rising health care costs and to assure the quality and accessibility of health care services (26,29,77).
One of the major thrusts in the evolution of the contemporary health-care delivery system appears to be an increased emphasis upon prevention of disease processes, illnesses, and impairments. This includes primary prevention which refers to the prevention of the occurrence of disease, secondary prevention which refers to early recognition and intervention of the disease process, and tertiary prevention which requires highly specialized medical and surgical care including rehabilitation services (19).

The United States is becoming increasingly sensitized to the enormous human and resource costs of chronic and catastrophic illness. Success in the primary prevention of many disease processes, illnesses, and impairments must include well-organized education programs (54,69). This phenomenon in our society is forcing both consumers and providers of health services to increasingly thoughtful about maintenance of health and the efficient utilization of the health-care delivery system (3,54).

Many different forces operating over the years are beginning to converge causing several constraints in the efficient utilization of health-care delivery systems. Deficits and maldistributions of health manpower and resources have resulted in fragmentation of health services. In addition, specialization in the medical and allied health professions has contributed to inefficient utilization of health manpower. As a result of fragmentation and specialization
the consumer does not know where to obtain medical assistance when it is required. This problem is further compounded by the lack of sufficient general practitioners to serve as an entry point into the health-care delivery system. Moreover, as urbanization and mobility of populations increase, and the complexities and disparities of our technologically advanced society multiply, health-care delivery systems geared to more settled social conditions are inadequate (4,19,20,21,65,78).

Our society is making earnest attempts to meet these problems through a variety of channels, including training of new categories of health personnel and reallocation of responsibility for health tasks. Traditionally, patient education has been assumed to be the responsibility of the physician. Today, clinical involvement by many other health professionals and the team approach to providing health care have shifted the responsibility of patient education (14,47, 48,54,55,67). However, an important factor which must not be overlooked is the fact that because of the responsibility of the individual citizen in the maintenance of his own health and the increasing role of the patient in the management of his own long-term illness, the citizens of our country can be said to be our greatest source of untapped health manpower (48,54). Formalized health education programs staffed by well-qualified health education specialists can make it possible to tap this enormous pool of health manpower effectively (48,49,50,54,55).
One of the most important inhibiting factors contributing to inefficient and ineffective utilization of the health-care delivery system has been the spiraling costs. In 1971, the insurance business welcomed the opportunity to help fund the work of the President's Committee on Health Education. A major recommendation of the President's Committee called for the creation of a private, nonprofit, free standing National Center for Health Education to stimulate, coordinate, and evaluate health education programs within the private sector, as well as to conduct and spur research designed to find ways to motivate people to practice good health habits (41). With the further financial assistance of the private health insurance business, the National Center for Health Education came into being in 1975. The Center is viewed as a valuable mechanism for strengthening the health education efforts of the private sector which to date have been sporadic and uneven; hence, insurers stand ready to continue to work with this enterprise. Priority attention by the Center is focusing on three program areas: (1) health education in the workplace; (2) health education implications of the National Health Planning and Resource Development Act of 1974 (P.L. 93-641); and (3) patient education in ambulatory care and in-patient settings (29). In addition to these developments, the Department of Health, Education, and Welfare had earlier created a Bureau of Health Education which, in effect, serves
as a counterpart within government of the private National Center for Health Education (13,23).

Additional innovative steps which the health insurance business has supported include: prospective rate review of institutional charges; certificate of need legislation; increased use of ancillary personnel to provide routine medical services; and expanded programs of preventive care and health education to motivate people to adopt good health habits. However, the health insurance business believes further steps should be taken in several areas including plan design, peer review, prospective rate review, health planning, data collection and creation of a sound national health insurance to control increases in health care costs (26,29,77). Therefore, the Blue Cross Association on behalf of the various Blue Cross Plans throughout the country, is currently considering the whole subject of patient education and the reimbursement aspects thereof, both for Medicare and Blue Cross reimbursement purposes (26,29).

Given these complexities and diversities, no single response is appropriate. As one mechanism among many, patient health education may contribute to containing health care costs and enhancing the individual's understanding of, and compliance with, his treatment regimen. Patient education reinforces the patient's awareness of his responsibility for his own health, and self-responsibility is crucial for the ultimate effectiveness of health care (77). In the
context of the many social forces contributing to the present rapid evolution of the health-care delivery system in the United States, professional, systematic health education must play an increasingly important role. This will help to assure more efficient and effective utilization of health services, more efficient use of health manpower, increased cost control, and closer cooperation between consumers and the providers. The greater understanding of health education as a process and broader implementation of its principles on the part of all health service personnel will increase the thrust toward considering each patient as an individual human being who deserves the right to have information concerning his health and guidance in using that information to his greatest advantage (1,3,5). Thus, the need to have a nucleus of professionally qualified health education specialists has grown out of a complex number of factors and forces. Therefore, this study was designed to provide data to set forth some guidelines for curriculum development in the preparation of health education specialists in health-care delivery settings.

Need for this Study

The employment of health education specialists by hospitals and other health-care delivery settings to develop educational programs integrated with health services is a relatively new field. To function intelligently and effectively in such settings, health education specialists must
be well oriented to health-care delivery programs and procedures as a basis for assessing and evaluating opportunities for health education intervention and for developing and implementing health education programs (7,8,9,15,17,27,52,57, 64,71). Hence, there is a need to determine the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques that should be acquired by health education specialists so they can meet the challenges and responsibilities of applying the many principles and practices of health education in health-care delivery settings.

Traditionally, the physician and the nurse have provided patients with most of their instructions concerning illness and health care. This has been the case primarily because of their direct contact with the patient and his family. The physician who is caring for the patient may be totally unaware of the barriers posed by social class, educational level and cultural difference that hinder the patient to learn about the management of his illness so that he may participate intelligently in his care (47,55). Moreover, the physician often proves to be a significant obstacle to communication with patients because of who he is and for what he stands (47). Likewise, nurses are limited in many ways to assume responsibility for the development of organized programs within health-care delivery settings. Nurses often lack knowledge of the educational approaches peculiar to the health sciences that would enable them to organize and develop programs (22,47,52,69).
Presently, special personnel are being introduced to health-care delivery settings to assume responsibility of patient education programs (7,12,20,24,50,70). It has been recommended that a person be designated to assume the responsibility for the development of an organized program within health-care delivery settings. Such a person who could be shared by several health settings, could be the director of health education for a specific setting, or could be the education specialist for the specific programs within the health-care delivery setting. The person could be a member of any of the health care professions so long as they have an educational background. The person's responsibility would include guiding the education programs through the appropriate channels and teaching health workers knowledge and skills involved in patient education (32,50).

Though patient education is presently being promoted as an activity by professionals, patients, and administrators alike, it nevertheless represents an innovation as an organized program. With the focus on preventive health measures and new ways of providing health care, it is essential for organized patient education programs to become an integral component of health care services. Planned patient education programs cannot be realized without the support of administrators and health professionals; nor will they be operational without carefully designed programs to assist physicians, nurses, and other allied health workers in the art of
patient education. All contacts with patients should be viewed as a potential time for information gathering, information giving, and reinforcement. Thus, all personnel who come into contact with patients should have the basic knowledge and skills involved in patient education (32,50,54). The health education specialist, however, supplements in an organized and continuous way, the work of others. His special contribution lies in his understanding of the educational approach and the methods to effect behavioral changes necessary to solving individual and community health problems. This expertise enables him to organize, develop, implement, and evaluate programs; to mobilize resources; and to coordinate the teamwork of other health disciplines (41,50,69,81,82).

An extensive search of the literature revealed studies which delineate curricula designed to prepare health education specialists for employment with governmental, private, or voluntary health agencies and as instructors in high schools, community colleges, universities and schools of public health. While some of the same knowledge, intellectual abilities and skills, methodologies, and techniques of health education specialists in general are applicable, additional knowledge and skills must be acquired by health education specialists to enable them to assume leadership in the development, implementation, and evaluation of health education programs in health-care delivery settings. Through conferences
with health practitioners employed in health-care delivery settings and an extensive search of the literature, no evidence was found regarding curriculum designed to prepare health education specialists for positions in health-care delivery settings. Consequently, this study was designed to provide more data regarding the areas of professional competence and unique skills fundamental to curriculum development aimed at preparing health education specialists for positions in health-care delivery settings.

**Statement of the Problem**

The central problem of this study was to determine the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be acquired by a person preparing for a position as health education specialist in a health-care delivery setting as a basis for curriculum development.

**Method of Attacking the Problem**

This study utilized the development and administration of a questionnaire to obtain judgments from a select group of health education professionals and practitioners regarding the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be included in the curriculum designed to prepare health education specialists for positions in health-care delivery settings.
Inasmuch as virtually no research has been done to identify such areas of professional competence and unique skills, the development of the questionnaire was of major importance in this research.

Limitations of this Study

1. This study is limited to the judgments of a professional panel of jurors.

2. This study is limited to identifying the broad knowledge areas of relative importance in the academic preparation of health education specialists preparing for positions in health-care delivery settings.

3. This study is not designed to be used as the ultimate criteria for determining the core curriculum content of higher education institutions responsible for the academic training of persons preparing for positions in health-care delivery settings. It is intended to provide only guidelines as a basis for curriculum development.

Basic Assumptions

1. Individuals with expertise in health manpower in health-care delivery settings can be identified and their judgments relied upon. It is assumed that the professional judgments of the selected professionals and practitioners for this study are representative of the majority of similar health education practitioners.

2. The results from this study can be utilized by educational institutions in developing a curriculum for the preparation of health education specialists for positions in health-care delivery settings.
3. The identification of the fundamental knowledge, intellectual abilities and skills will lead to more efficient training and utilization of health education specialists.

Definition of Terms

In order to facilitate a better understanding of the terminology contained within this study, the following terms have been defined:

1. **Health-Care Delivery Settings**: A complex organization comprised of medical and paramedical persons whose objectives include prevention, treatment, rehabilitation, and education of the consumers of the service.

2. **Health-Care Delivery System**: A complex structure of practitioners, organizations, and consumers acting individually and collectively according to their needs, wants, interests, and capacities.

3. **Health Education**: "A process with intellectual, psychological, and social dimensions relating to activities which increase the abilities of people to make informed decisions affecting their personal, family, and community well-being. This process, based on scientific principles, facilitates learning and behavioral change in both health personnel and consumers, including children and youth." (30, p.28)

4. **Health Education Specialist**: An individual with professional training who is qualified to assume responsibilities within health-care delivery settings.

5. **Patient Education**: Those health experiences designed to influence learning and behavior change which occur as a person receives preventive, diagnostic treatment, and rehabilitative services.
II. REVIEW OF RELATED LITERATURE

There has been a prodigious growth in both the number and variety of studies relevant to the practice of health education, as well as an increased realization of the importance of education in closing the gap between research findings and their application in programs affecting the health and welfare of individuals, groups, and communities. Several studies related to the education and professional roles of the health education specialist have appeared in the recent literature. Information available concerning the fundamental knowledge, intellectual abilities and skills, techniques, and methodologies which should be acquired by a person preparing for a position as health education specialist in a health-care delivery setting is summarized in the following literature review.

Boatman et al (11) prepared a comprehensive statement on professional preparation in health education in schools of public health in the United States and Canada. The report discusses the concept of health education; preparation in health education for all health workers and for the specialist in health education; health education research; continuing education; and manpower needs. A correlative statement on the preparation of health education specialists is that by Steuart (66). He exposed his own program in one of the accredited schools of public health to the light of self-
examination and discussed critically the major parameters of health education and of curricula for the preparation of health education specialists. One of his primary concerns is the development of a balance between theory and practice. The relationships between theory and practice in health education constitute the theme of a report by the Society of Public Health Educators (11). It contains a series of papers illustrating applications of theory to practice in a variety of program areas and an integrative summary by Rügen (11), who describes in clear outline the principles and guidelines for health education practice.

In 1965, Martikainen (35) studied the role of the health education specialist in the preparation of other health workers. Her objective was to conduct an initial exploratory study on an international basis to obtain data on the degree of consensus on the role of incumbents of health education specialist positions in governmental health agencies in the preparation of other health workers. Data were obtained from mailed questionnaires sent to three professional categories of role definers: health education specialists in government agencies at national, regional, state, or provincial levels; health administrators to whom the specialists were responsible; and professors of health education in accredited schools of public health in the United States. The questionnaire data were used to examine degrees of consensus within and between the specified groups of role definers. Seven clusters of
specified health education activities were examined. She found difference in degrees of consensus both within and between groups on the expectations held for a considerable number of the performance items.

A review of professional-preparation studies indicated that adequate preparation of a major or minor in health education depends upon the kinds of courses that comprise this major or minor (25). Firstly, there are traditional liberal and academic studies in the basic disciplines appropriate to the profession. Secondly, every profession is concerned not only with relatively discrete basic disciplines but with certain relations between them. One major need is for education in the relationship between human biology and behavior with special reference to health and disease in the individual, family, and community; a basic and disciplined approach to the understanding of human functioning and malfunctioning, its nature and causes, and the complex of biological, social, and environmental factors that contribute to it. Thirdly, the analytical and interpretive processes of diagnosis in medicine and of epidemiology in public health; the skilled discriminative selection of measures to achieve therapy, rehabilitation, disease prevention or health promotion and the disciplined and imaginative performance of these measures, are all manifestly among the typical concerns of the professional preparation of a health education specialist.

Steuart (66) states that the essence of health education
is its scientific concern with the role of human behavior, individual and societal, in the natural history of health and disease considered from the special point of view of the determinants of change in such behavior with an operational focus on those planned influence-attempts directed toward maintenance, reinforcement or modification of behavior in the extent to which this may demonstrably affect curative, rehabilitative and disease preventive processes and the promotion of health. Within the context of a health services delivery system, Shapiro (59) reports that health education can be viewed as an active process aimed at providing and strengthening influences and experiences for both staff and covered populations which will encourage health maintenance and recovery from illness.

Shapiro (59) stated that the rationale for health education effort can be expressed in both philosophical and pragmatic terms. Philosophically, hominid evolution has in all societies revealed traditions which express man's concern for health, whether labeled magico-religious-supernatural or secular-scientific. Thus, each has a need to know, to be educated in health, which is fulfilled in various ways. One's right to know is an ethical expression of our particular culture. There is also our stated preferences for education over manipulation, free choice over force, respect for individual dignity and integrity over contempt and exploitation of others. Shapiro (59) suggests that pragmatically, particular activities
and goals also mandate education. Thus, the practicing physician writes a prescription he hopes the patient will take. A health department hopes mothers will bring their children for immunizations. Schools hope students will learn to handle drugs appropriately as well as to read. And other agencies hope people will stop smoking or eat less. All health-related activities have educational or teaching-learning components. Some are major or crucial, requiring large, conscious effort. Others are minor or incidental, occurring with no interest or awareness. Shapiro (59) states that a significant number of health-related goals are simply not attainable without appropriate behaviors, all of which are learned.

Health education specialists, in their longer and more frequent contacts with individuals, have more opportunities to observe behavior and to listen to expressions of thought under varying conditions than do physicians whose contacts are brief and intermittent. The American Journal of Public Health (39) reports that health education specialists hold a unique place in the minds of patients. The health education specialist's observations of health problems are sooner or later channeled to some physician, parent, or employer. Patients seem to know health education specialists and to have confidence in them. They will often come to nurses concerning illnesses or injury or when they need help, sympathy and comfort. Very often patients minimize their difficulties, thinking
them not important enough to take to the physician, but will discuss them with the nurse or health education specialist at length and with ease and assurance that right counsel will be received. As a result, it is becoming an accepted responsibility of health care providers to help the consumer learn how best to achieve and maintain a level of health appropriate to his own needs and those of the community. This appears to be inevitable because society can no longer tolerate a health-care system in which the consumer's right and need to know and participate is ignored. An essential component of every health-oriented effort should be assisting people toward an active and informed role in their own health maintenance, treatment, and care. The pace of this trend will increase to the extent that all providers take responsibility to recognize the patient's need and ability to be part of the health team, actively participating in his own treatment and care (52,55).

Several authors (16,28,38,45,68,81) have stated that health education, to be ideal in outlook and forceful in practice, is a requisite in an everchanging democratic culture. Care needs to be exercised to recognize the inevitability of change, to guard against a too narrow concept of educational activity, and to avoid the acceptance of concepts of social stratification and cultural rigidity growing out of individual or professional narrowness and inflexibility (38). In spite of the diversity of professional background of health education specialists as it is reflected in their opinions, attitudes,
and patterns of approach to health matters, there is a common
bond which binds together their interests in the field of
public health. This bond is health education. Walker (1)
states that the success of a patient education program is
largely dependent upon the effective cooperation of all the
members of the health team and may be developed only by those
who participate in the promotion of personal health and the
integration of many individual's well-being in the collective
entity which is called public health.

Reader (47) comments that in accepting the newer philos-
ophy of patient education, physicians should discard their
earlier hospital attitudes toward health education special-
ists as subordinates. The medical profession is beginning to
accept the idea that patient education is a cooperative adven-
ture that must be cooperatively planned by every member of the
health team (14,47,54). The constantly changing health needs
of our society are refocusing attention on patient education.
Society is more cognizant that ever before of the value of
health and is demanding increasingly more health education.
Although health education of patients has been going on for
years in many settings, the quality and intensiveness of such
endeavors, as well as the disciplines responsible for education
programs, have varied (8,50,59,85). Over the years, patient
education programs have been initiated, conducted, and devel-
oped in hospitals by physicians, nurses, and dietitians (50,
70,85). Richards (50) states that now special personnel are
being introduced to the hospital to assume this responsibility. Examples are the Patient Educator at Indiana University Hospital, Bloomington, Indiana, and the Health Educator at Charles T. Miller Hospital, Minneapolis, Minnesota (50). Young (85) suggests that as the general hospital develops more and more into a central position in the health care of the community, its educational roles will change and expand. Therefore, there is a continuing need to educate health education specialists to understand and to implement the new and developing roles of patient education as an integral component of total patient care.

**Role and Functions of Health Education Specialists**

All educators have, to varying degrees, been educated in selected biological and social sciences, and in psychological and sociological foundations of education. Working in the field of health, whether in health-care delivery settings, school systems, or other agencies in the community, the trained health education specialist adds an understanding of health functions, organization, and practices related to health services and goals. With extended training, the health education specialist learns to analyze educational needs, design programs, mobilize resources, and evaluate efforts (6,24, 33,47,50,53,83).
Health Maintenance Organizations (HMO)

Birnbaum (9) states that in a health maintenance organization (HMO) setting a professional health educator is an organizer, developer, and facilitator of educational activities rather than a person who is teaching special skills on how to stay well or how to get well after being ill. The health educator makes possible interaction between lay people and the professionals. To the health educator falls the task of interpreting consumer needs to the medical staff and to other professionals in the health team. At other times, because of his understanding of behavior patterns, he will help the clinician to decide how a special and expressed need is to be met. Birnbaum (9) further comments that health educators can be instrumental in producing motivation of patients by instructing them to take considerable responsibility for their well-being. This is probably the area where health education, carried out by health educators, can be most effective (9).

Shapiro (59) states that there are a number of traditional functions carried out by health educators which have created relief for the clinician by providing educational opportunities outside the physician's office but within the HMO. Health education has been traditionally performed on a one-to-one basis by the physician, nurse, or by some aide at the time of visit. However, time pressure frequently gets in
the way of such education. Another effective and frequently used device is education in groups where individuals with common health problems are brought together. Health educators are frequently busy facilitating the creation of such groups, bringing physicians and other health professionals together to interact with consumers around specific health and medical problems (9, 34, 59).

Birnbaum (9) states that the health educator in a HMO will be most successful as long as the consumer-patient is willing, able, and organized to spell out needs effectively and is able to allocate priorities. The health educator has to be vitally interested in the continued existence of a responsible and responsive body of consumers. Leadership with the consumer body has to be developed. This will not only strengthen the effectiveness of an educational program but will also produce harmonic representatives, physicians, and management team of the organization (9, 59).

**Hospitals**

Reader (48) and de la Vega (17) report that the employment of trained and qualified health education specialists to assist in the development of organized health education programs in hospitals has been limited for the most part, to demonstration projects. Organized and coordinated ongoing programs of health education are rare in established medical care settings (17). Bernheimer (8) states that the development
of general patient education programs initiated, conducted, and developed by health education specialists is much more recent. The health education specialist has unique contributions to make in the areas of motivation, learning, small group behavior, cultural change, community organization, communications, social perception, individual differences, leadership, and community dimensions. Griffiths (28) states that these contributions cannot be made by any one who is not sufficiently trained in the art of health education and in the application of behavioral sciences. This expertise enables him to plan, implement, and evaluate the educational aspect of general patient education programs.

Conant (15) indicates that the health education specialist is concerned with creation of public interest in health and in the promotion of an awareness of health needs. He acts as a stimulator in aiding other specialists to make more profitable use of each contact with the consumers. He serves as a resource person to health workers in using educational materials and skills, to the community about programs and services, to the unreached public involving individuals and small groups in promoting the use of services, and as an organizer in the coordination of health education activities with the health-care delivery system. His services are directed toward bridging the gaps between providers and consumers and helps avoid duplication of effort. He pulls together resources in creating an efficient level of health
education services (15). Prescott (42) states that program-based health education specialists could direct their attention to bridging the gap between community and agencies by providing the community with greater understanding and knowledge of the services available and the agency with a greater understanding and knowledge of what the community needs and wants.

Roberts (51) reports that health education specialists have the responsibility for being familiar with the facts and evidence from research on educational methods, and using these as their base in planning sound education to aid in achieving agreed-upon program objectives insofar as possible. On the basis of educational research, they select educational methods and activities after diagnosing the forces in the situation involved (51).

Mathews (36) states that a health education specialist's recognition of the administrative climate of an organization and his consideration of the implications it has for the teaching-learning process may be significantly related to the success or failure of the proposed educational endeavor. The health education specialist working in a technological climate may be further handicapped by his own role concept. When a health education specialist is focusing on the task at hand, clarifying the content of goals and setting limits, he is carrying out an instrumental role. When he is being sensitive to the feelings of people and using his skills to
help members express their feelings and to bring about an integration of group sentiment, the health education specialist is carrying out an expressive role (36).

The tendency for health education specialists to give primary emphasis to the expressive aspects of their professional role can be interpreted in several ways. It may be that among the groups with whom they work, the natural leadership which emerges tends to fill the instrumental need of the group, leaving the expressive needs to be filled by the health education specialist. Also, it may that as a result of training, persons practicing health education tend to be more comfortable performing the expressive leadership role. Mathews (36) comments that the academic preparation for health education, with its emphasis on human behavior, group process, and community organization, may over-stress the expressive component and interpersonal skills needed for effective social interaction at the expense of the instrumental component (36).

Ulrich (70) states that the health education specialist's role is a preparatory and evaluative one—he plans the program content, works out the educational process, develops teaching capability in a variety of health professionals, and assesses the effectiveness of the entire operation. The health education specialist acts as a catalyst and coordinator in the planning and arranging community programs, working out appropriate materials and methods to meet the educational
needs determined, setting goals, and finding teachers (70). The qualified health education specialist has training in the kinds of educational approaches peculiar to the health sciences and health beliefs of the population. He knows community resources, has knowledge of educational materials and how to use them, and has training in group process and its educational applicability to the adult learning situations. It is this unique training that will enable him to work with health personnel to develop more effective patient instruction (17, 70).

Fiori et al (24) report that the hospital administrator initially saw the health education specialist primarily as a media and materials person. Health education personnel, on the other hand, emphasized the utilization of health education specialists as resource consultants and program developers who would work in close cooperation with and through key hospital staff responsible for direct service to patients. Eventually, both of these ideas were incorporated in the hospital demonstration project with the primary focus on the latter approach (24). The successful health education specialist will employ more than his skills in the use of learning theory and teaching methods, techniques, and tools. The art which largely determines the degree of his influence in planning and program development is an expression of his understanding of the culture of the hospital he may work with. He must respond to its administrative character and atmosphere,
use the skill of interpersonal relationships, and be sensitive to role identification, value hierarchies, and the process of change (24,33,36,81).

Several authors (17,50,81,85) have stated that the role of the health education specialist is not to teach the patient directly but rather to see that patients and families receive necessary instruction from medical and paramedical staff members. The health education specialist acts as a link between the hospital and community agencies in matters related to patient and family education (17). Lesparre (33) states that the obstacles in the health care institutions to patient education are all too familiar and are doubtless the same the world over. For all of these reasons and more, the American Hospital Association has in various ways tried to persuade health professionals, hospital administrators, and department heads that it is possible to systematically organize patient education as a service and such a service is not only of direct benefit to the patient, but also improves the quality of care, has the potential of reducing the recurrence of illness, and promotes the most timely and effective use of health care resources (33,48,69). The Task Force on Patient Education for the President's Committee on Health Education (69) states that the ultimate goal of organized, planned patient education programs is to help individuals acquire new knowledge, attitudes and behavior that will promote their ability to care for themselves more adequately; maintain a
positive state of health; and prevent possible reoccurrences when feasible. The emphasis on instruction has grown with nationwide recognition of the need for preventive health care and maintenance (5,69). Therefore, opportunities for hospital health education programs are rapidly expanding. The availability and readiness of the health education specialist to use these opportunities will largely determine developments in the next few years (5,17,24,27,50,70,85).

Reflected in this intensive and extensive review of literature is the urgent need to consider ways of utilizing the existing pool of health education specialists, both undergraduate and graduate, efficiently and effectively. The accreditation of new programs to prepare health education specialists is clearly needed. This research was pursued with the hope of providing useful information which would contribute to the identification of the fundamental knowledge, intellectual abilities and skills, techniques and methodologies which should be acquired by a person preparing for a position as health education specialist in a health-care delivery system.
III. RESEARCH METHODOLOGY

The method of investigation utilized in this study was the development and administration of a questionnaire to obtain judgments from a selected group of health education professionals and practitioners regarding the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be included in the curriculum designed to prepare health education specialists for positions in health-care delivery settings. Inasmuch as virtually no research has been done to identify such areas of professional competence and unique skills, the development of the questionnaire was of major importance to this study.

Sources of Data

Data for this study were obtained from the following sources: professional literature; published and unpublished programs established in hospitals and health maintenance organizations; and judgments of a highly select, expert committee on the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be acquired by a person preparing for a position as health education specialist in a health-care delivery system. In addition, these sources were supplemented by the researcher's participation in the following activities: graduate level health classes regarding health planning and resource development
and health-care delivery systems; practicums concerning the application of the comprehensive health informational program systems originally developed by the Communicable Disease Center of the U.S. Public Health Service; assessment and evaluation of the educational components of a general community hospital; organization and implementation of education programs such as senior citizen health fairs and screening clinics for blood pressure, cancer, and lung function; observation of educational programs at community general hospitals and health maintenance organizations in the State of Oregon; and discussion with health education practitioners in health-care delivery settings.

Criteria used for the selection of expert committee members were:

1. The committee should consist of individuals from the various health-care delivery systems involved in health education.

2. Approximately one-half of the committee should be from hospital settings and one-half from health maintenance organization settings. There should be an attempt to get equal geographical distribution within each professional category.

3. The nomination of experts should be based upon their professional reputation and expertise in their respective fields as determined by such criteria as current and past professional responsibilities, professional affiliations, research, publications, and leadership.

4. Members should be chosen on the basis of their interest in, or experience with, patient education programs and academic preparation of health education specialists.
A list of potential committee members who met these criteria was formulated. From this potential list, 15 members were selected to serve as members of the expert committee (Appendix B). Alternates were selected to replace members who did not wish to engage in this study. The size of the committee was thought to be large enough to be analyzed statistically yet small enough to handle the logistics conveniently. A carefully chosen committee of as few as ten to twelve individuals is usually sufficient to explore a problem and reach a valid consensus (46).

Procedures for the Collection of Data

The procedures utilized in carrying out this study consisted of four major steps: (1) construction of the questionnaire; (2) pretesting and revision of the questionnaire; (3) administration of the questionnaire to obtain judgments on specific items; and (4) statistical analysis of the results.

Construction of the Questionnaire

Based upon the aforementioned sources of data, items relative to knowledge, intellectual abilities and skills, methodologies, and techniques essential to the professional preparation of health education specialists in health-care delivery settings were developed. The initial list consisted of 65 items which were categorized into the following
seven major subject areas: (1) Education; (2) Behavioral Sciences; (3) Biological Sciences; (4) Organizational Processes and Management; (5) Communications; (6) Organization for Health; and (7) Health Sciences.

Individual items within each subject area were assigned a score based on the following Likert-type scale with response values ranging from a low of 1.0 to a high of 5.0:

1. The health education specialist requires no proficiency with this cognitive area.
2. The health education specialist requires slight proficiency with this cognitive area.
3. The health education specialist requires moderate proficiency with this cognitive area.
4. The health education specialist requires considerable proficiency with this cognitive area.
5. The health education specialist requires complete proficiency with this cognitive area.

To facilitate completion of the pretest questionnaire the response categories of accept, modify, and delete were substituted for the above-mentioned Likert-type response values.

Pretesting and Revision of the Questionnaire

The questionnaire was pretested for clarity and content by ten individuals representing hospital, health maintenance
organization, and other health-care delivery education programs (Appendix A). Recommendations of the pretest were incorporated in refining the final research questionnaire which consisted of 51 items (Appendix C).

**Distribution of the Questionnaire**

The selected expert committee members were first contacted by letter which explained the study and invited their participation (Appendix F). Upon confirmation of participation, a questionnaire (Appendix C) was mailed to each participant accompanied by a personal data form (Appendix E), directions for completing the questionnaire (Appendix D), and the time limitation for its completion and return to the investigator (Appendix G). A self-addressed, stamped envelope was provided for return of the questionnaire. Fourteen days after the mailing of the questionnaire, a dunning letter (Appendix H) was sent to those committee members who had not responded.

**Treatment of the Data**

The items of the questionnaire were categorized on the basis of their similarity into seven major subject areas. Each broad subject area contained a varying number of knowledge, intellectual abilities and skills, methodologies, and techniques. A weighted percentage, referred to in this study as the "Index of Importance" was calculated for each item.
The "Index of Importance" was determined as follows: weights were assigned to each of the items within each subject area on the following Likert-type scale with response values ranging from a low of 1.0 to a high of 5.0. Given the weights indicated, it becomes possible to compute the percentage of the highest possible rating achieved by each item. The percentage may be taken as the "Index of Importance" or "Index". The indices were derived according to the following formula:

\[ P = \frac{100 \left( W_1 f_1 + W_2 f_2 + W_3 f_3 + W_4 f_4 + W_5 f_5 \right)}{5 \cdot \sum f} \]

in which

- \( W = \) weight for each response; i.e., 1 for no proficiency; 2 for slight proficiency; 3 for moderate proficiency; 4 for considerable proficiency; and 5 for complete proficiency

- \( f = \) frequency of response for each item

- \( \sum f \) = sum of frequencies of responses for the particular item

- 5 = the highest possible weighting

The weighted percentage, or "Index", is derived as follows: first, by multiplying the weights for each of the five responses by the frequency of responses recorded for each item; second, by adding these products; third, by multiplying this sum by the number of 100; and finally by dividing this sum by the number of responses for the particular items multiplied by five.
To illustrate the computation indicated in the above formula, the values for the first item on the questionnaire are substituted where the column weights are +1, +2, +3, +4, and +5; column frequencies are 0, 0, 4, 4, and 7, respectively; and the sum of the frequencies of the judgment is 15:

\[ \frac{100 \left[ (1 \cdot 0) + (2 \cdot 0) + (3 \cdot 4) + (4 \cdot 4) + (5 \cdot 7) \right]}{5 \cdot 15} \]

\[ \frac{6300}{75} \]

\[ P = 84.00 \]

Thus, the illustrative item received a composite rating of 84%. This percent, called the "Index", thus served as a basis for assigning priorities to respective items on the questionnaire. Each of the 51 items was treated in like manner. For the purpose of analysis, individual items were listed within each subject area on the basis of their priority as determined by their "Index of Importance".
Distribution of Indices

The "Indices of Importance" have a possible range of from 0 to 100. As a basis for determining the relative importance of each item the following arbitrarily assigned scale was applied to the weighted percentages: Very High Priority (90 to 100%); High Priority (80 to 89%); Moderate Priority (70 to 79%); Low Priority (60 to 69%); Very Low Priority (50 to 59%); and No Priority (0 to 49%). Six categories were arbitrarily selected. A large number of categories, namely six, yield truer relative values than a smaller number since the span of numbers in each is not so great; therefore, a more refined classification is possible (46).

Summary of Methodology

A 51 item questionnaire was developed relating to the desired knowledge, intellectual abilities and skills, methodologies, and techniques of health education specialists preparing for positions in health-care delivery settings. Following a pretest and revision of the questionnaire, it was administered to 20 health education professionals and practitioners. Results were tabulated, a weighted percentage was calculated for each item, and a priority listing was made of the relative importance of each item as judged by a panel of experts.
IV. RESULTS AND ANALYSIS

The results and analysis of the data obtained on the questionnaire returned by the members of the expert committee are dealt with sequentially as follows: presentation of raw data; relative comparisons of the priority classifications as expressed by the expert committee members; and a discussion of the relative importance of each subject matter area.

Results of Questionnaire

Four weeks after the questionnaire was mailed to the 20 potential committee members, 17 (86%) had been returned. Two of the 17 questionnaires returned were incorrectly completed and were eliminated from the study; therefore, a total of 15 questionnaires were analyzed. An additional questionnaire was received after the data had been analyzed.

Fifteen of the 17 potential expert committee members met the criteria of this study for the selection of panel members. Responses received from the 15 questionnaires of the selected expert committee are presented in Table 1.

As shown in Table 1, there was a wide variation in the number of items in each major subject matter category. The variation in distribution of these items could be interpreted in a variety of ways. Perhaps the health professionals and practitioners were able to express their desired proficiency
<table>
<thead>
<tr>
<th>Subject Matter Areas and Items</th>
<th>Number of Responses</th>
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<tbody>
<tr>
<td>I. Education</td>
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<td></td>
</tr>
<tr>
<td>Knowledge of:</td>
<td></td>
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<tr>
<td>1. Theories of teaching and learning</td>
<td>0 0 4 4 7</td>
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<tr>
<td>2. Educational research methods and design</td>
<td>0 1 5 8 1</td>
<td>72.00</td>
</tr>
<tr>
<td>3. Formulation of behavioral objectives</td>
<td>0 0 2 2 11</td>
<td>92.00</td>
</tr>
<tr>
<td>4. Curriculum construction</td>
<td>0 1 3 9 2</td>
<td>76.00</td>
</tr>
<tr>
<td>5. Quantitative and qualitative educational evaluations</td>
<td>0 1 2 9 3</td>
<td>78.67</td>
</tr>
<tr>
<td>6. Criteria for selection of health education materials appropriate for particular individuals and/or groups</td>
<td>0 0 0 9 6</td>
<td>88.00</td>
</tr>
<tr>
<td>7. Selection and use of programmed instruction, audio-visual devices, methods, and materials for various individuals and/or groups</td>
<td>0 0 4 8 3</td>
<td>78.67</td>
</tr>
<tr>
<td>8. Procedures to determine the readability levels of printed materials designed for use by patients in health-care delivery institutions</td>
<td>0 2 4 5 4</td>
<td>74.67</td>
</tr>
</tbody>
</table>
### II. Behavioral Sciences

**Knowledge of:**

1. **Principles of human growth and development**
   - Number of Responses: 0 4 2 5 4 72.00

2. **Behavioral modification and change strategies**
   - Number of Responses: 0 2 3 6 4 76.00

3. **Individual and group counseling methods and techniques**
   - Number of Responses: 2 1 6 4 2 64.00

4. **Values and attitudes which influence health behavior**
   - Number of Responses: 0 0 3 5 7 85.33

5. **Theories of motivation**
   - Number of Responses: 0 1 3 4 7 82.67

6. **Community organization and development**
   - Number of Responses: 0 2 2 4 7 81.33

7. **Social organization**
   - Number of Responses: 0 2 4 7 2 72.00

8. **Political structure and forces of the community**
   - Number of Responses: 1 1 5 6 2 69.33
### III. Biological Sciences

Knowledge of:

1. Fundamentals of the normal structure and function of human body systems
   - Number of Responses: 0 3 5 4 3
   - Index: 69.33

2. Basic principles of microbiology
   - Number of Responses: 1 4 7 3 0
   - Index: 56.00

3. Basic principles of laboratory methods and procedures
   - Number of Responses: 2 6 4 3 0
   - Index: 50.67

### IV. Organizational Processes and Management

Knowledge of:

1. Procedures of public relations
   - Number of Responses: 1 0 5 8 1
   - Index: 70.67

2. Fundamentals of manpower planning and development
   - Number of Responses: 1 3 7 3 1
   - Index: 60.00

3. Problem-solving methodology
   - Number of Responses: 0 2 0 6 7
   - Index: 84.00

4. Models for rational decision-making
   - Number of Responses: 1 1 2 6 5
   - Index: 77.33

5. Procedures for program implementation and management
   - Number of Responses: 0 0 0 5 10
   - Index: 93.33
### IV. Organizational Processes and Management

Knowledge of:

6. Organizational theory and structure as it relates to the health-care delivery institutions  
   0 0 1 9 5 85.33

7. Data processing  
   1 3 6 4 1 61.33

8. Principles of management by objectives  
   0 0 5 7 3 77.33

9. Survey methods  
   0 2 5 7 1 69.33

10. Methodology for program evaluations  
    0 1 1 9 4 81.33

### V. Communications

Knowledge of:

1. Public information methods  
   0 2 5 3 5 74.67

2. Written and oral communications  
   0 0 1 4 10 92.00

3. A modern language  
   3 4 2 1 5 61.33

4. Basic medical terminology  
   0 0 6 8 1 73.33
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<tr>
<td></td>
<td>1 2 3 4 5</td>
<td></td>
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</tbody>
</table>

**VI. Organization for Health**

Knowledge of:

1. Basic organization and functions of the health-care delivery institution's departments and services 0 0 4 6 5 81.33

2. Various processes and procedures in health-care delivery institutions for promoting quality of care 0 1 9 4 1 66.67

3. Concepts of area planning and regionalization of resources for health-care delivery 0 1 9 3 2 68.00

4. Principles of the development and maintenance of medical library 3 5 6 1 0 46.67

**VII. Health Sciences**

Knowledge of:

1. Causation, prevention and control of major chronic diseases and impairments 0 0 7 6 2 73.33

2. Causation, prevention and control of specific communicable diseases 0 1 7 5 2 70.67
Table 1 continued

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<td>Knowledge of:</td>
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<tr>
<td>3. Principles of maternal and child health</td>
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<td>4. Environmental factors affecting health and disease</td>
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<td>5. Principles of mental health</td>
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<tr>
<td>6. Principles of dental health</td>
<td>0 2 6 6 1</td>
<td>68.00</td>
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<tr>
<td>7. Fundamentals of nutrition</td>
<td>0 1 5 8 1</td>
<td>72.00</td>
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<tr>
<td>8. Principles and procedures of epidemiology</td>
<td>0 0 9 5 1</td>
<td>69.33</td>
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<tr>
<td>9. Occupational health</td>
<td>0 1 9 5 0</td>
<td>65.33</td>
</tr>
<tr>
<td>10. Principles of drug use, misuse, and abuse</td>
<td>0 1 7 7 0</td>
<td>68.00</td>
</tr>
<tr>
<td>11. Principles of sex education</td>
<td>0 3 6 6 0</td>
<td>64.00</td>
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<tr>
<td>12. Fundamentals of first aid and cardiopulmonary resuscitation</td>
<td>0 1 9 4 1</td>
<td>66.67</td>
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### VII. Health Sciences

**Knowledge of:**

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<tr>
<td>13. Fundamentals of consumer education</td>
<td>0 1 4 5 5 78.67</td>
</tr>
<tr>
<td>14. Organizational structure and function of county, state, and federal health agencies</td>
<td>0 1 7 4 3 72.00</td>
</tr>
</tbody>
</table>
levels better in some areas than in others. The distribution could suggest areas of greater or lesser importance to the participating health education professionals and practitioners. It should also be noted that the number of items pertaining to the subject area of health sciences outnumbered all other categories. This should not necessarily be interpreted to mean that other major subject areas are less important or more difficult to identify and articulate.

Although provision was made on the questionnaire for the experts to comment and expand upon the questionnaire items, no new items were presented. The comments of the expert committee members are reported in relation to the discussion of each subject area.

**Analysis of Subject Matter Categories**

For analysis, the 51 items of the questionnaire are arranged within seven broad areas: (1) Education; (2) Behavioral Sciences; (3) Biological Sciences; (4) Organizational Processes and Management; (5) Communications; (6) Organization for Health; and (7) Health Sciences. The items comprising each area are listed according to their "Index of Importance", or weighted percentage. In addition to these data, Table 2 through 8 include for each item, the distribution of responses for each category on the five-point scale.
Education

As shown in Table 2, health education professionals expressed strong feelings about the desired fundamental knowledge, intellectual abilities and skills, methodologies and techniques for health education specialists preparing for positions in health-care delivery settings. One item had a very high priority, that of knowledge of formulation of behavioral objectives (#3).

Given a high rating were the knowledge of criteria for selection of health education materials appropriate for particular individuals and/or groups (#6) and knowledge of theories of teaching and learning (#1).

A number of items were given a moderate rating: knowledge of quantitative and qualitative educational evaluations (#5); knowledge of selection and use of programmed instruction, audio-visual devices, methods, and materials for various individuals and/or groups (#7); knowledge of curriculum construction (#4); knowledge of procedures to determine the readability levels of printed materials designed for use by patients in health-care delivery institutions (#8); and knowledge of educational research methods and design (#2).
<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Formulation of behavioral objectives</td>
<td>92.00</td>
<td>Very High</td>
<td>0 0 2 2 11</td>
</tr>
<tr>
<td>6. Criteria for selection of health education materials appropriate for particular individuals and/or groups</td>
<td>88.00</td>
<td>High</td>
<td>0 0 0 9 6</td>
</tr>
<tr>
<td>1. Theories of teaching and learning</td>
<td>84.00</td>
<td>High</td>
<td>0 0 4 4 7</td>
</tr>
<tr>
<td>5. Quantitative and qualitative educational evaluation</td>
<td>78.67</td>
<td>Moderate</td>
<td>0 1 2 9 3</td>
</tr>
<tr>
<td>7. Selection and use of programmed instruction, audio-visual devices, methods, and materials for various individuals and/or groups</td>
<td>78.67</td>
<td>Moderate</td>
<td>0 0 4 8 3</td>
</tr>
<tr>
<td>4. Curriculum construction</td>
<td>76.00</td>
<td>Moderate</td>
<td>0 1 3 9 2</td>
</tr>
<tr>
<td>8. Procedures to determine the readability levels of printed materials designed for use by patients in health-care delivery institutions</td>
<td>74.67</td>
<td>Moderate</td>
<td>0 2 4 5 4</td>
</tr>
<tr>
<td>2. Educational research methods and design</td>
<td>72.00</td>
<td>Moderate</td>
<td>0 1 5 8 1</td>
</tr>
</tbody>
</table>
Behavioral Sciences

As shown in Table 3, the expert committee members expressed three high ratings: knowledge of values and attitudes which influence health behavior (#4); knowledge of theories of motivation (#5); and knowledge of community organization and development (#6).

Three items were given a moderate rating. The most important moderate priority item identified in the area of behavioral sciences was the knowledge of behavioral modification and change strategies (#2). Next in importance were the knowledge of principles of human growth and development (#1) and knowledge of social organization (#7).

Given a low rating were the knowledge of political structure and forces of the community (#8) and knowledge of individual and group counseling methods and techniques (#3).
TABLE III. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF BEHAVIORAL SCIENCES.

<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Values and attitudes which influence health behavior</td>
<td>85.33</td>
<td>High</td>
<td>0 0 3 5 7</td>
</tr>
<tr>
<td>5. Theories of motivation</td>
<td>82.67</td>
<td>High</td>
<td>0 1 3 4 7</td>
</tr>
<tr>
<td>6. Community organization and development</td>
<td>81.33</td>
<td>High</td>
<td>0 2 2 4 7</td>
</tr>
<tr>
<td>2. Behavioral modification and change strategies</td>
<td>76.00</td>
<td>Moderate</td>
<td>0 2 3 6 4</td>
</tr>
<tr>
<td>1. Principles of human growth and development</td>
<td>72.00</td>
<td>Moderate</td>
<td>0 4 2 5 4</td>
</tr>
<tr>
<td>7. Social organization</td>
<td>72.00</td>
<td>Moderate</td>
<td>0 2 4 7 2</td>
</tr>
<tr>
<td>8. Political structure and forces of the community</td>
<td>69.33</td>
<td>Low</td>
<td>1 1 5 6 2</td>
</tr>
<tr>
<td>3. Individual and group counseling methods and techniques</td>
<td>64.00</td>
<td>Low</td>
<td>2 1 6 4 2</td>
</tr>
</tbody>
</table>
Biological Sciences

As shown in Table 4, one item had a low rating and two items had a very low rating. Given a low rating was the knowledge of fundamentals of the normal structure and function of human body systems (#1). Next in importance were the knowledge of basic principles of microbiology (#2) and the knowledge of basic principles of laboratory methods and procedures (#3) which were both given a very low priority rating.
TABLE IV. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF BIOLOGICAL SCIENCES.

<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Fundamentals of the normal structure and function of human body systems</td>
<td>69.33</td>
<td>Low</td>
<td>0 3 5 4 3</td>
</tr>
<tr>
<td>2. Basic principles of microbiology</td>
<td>56.00</td>
<td>Very Low</td>
<td>1 4 7 3 0</td>
</tr>
<tr>
<td>3. Basic principles of laboratory methods and procedures</td>
<td>50.67</td>
<td>Very Low</td>
<td>2 6 4 3 0</td>
</tr>
</tbody>
</table>
As shown in Table 5, one item had a very high rating, that of knowledge of procedures for program implementation and management (#5).

Given a high rating were the knowledge of organizational theory and structure as it relates to the healthcare delivery institutions (#6); knowledge of problem-solving methodology (#3); and knowledge of methodology for programs evaluations (#10).

Health professionals and practitioners expressed a moderate rating for the knowledge of principles of management by objectives (#8); knowledge of models for rational decision-making (#4); and knowledge of procedures of public relations (#1).

Given a low rating were: knowledge of survey methods (#9); knowledge of data processing (#7); and knowledge of fundamentals of manpower planning and development (#2).
TABLE V. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF ORGANIZATIONAL PROCESSES AND MANAGEMENT.

<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
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</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Procedures for program implementation and management</td>
<td>93.33</td>
<td>Very High</td>
<td>0 0 0 5 10</td>
</tr>
<tr>
<td>6. Organizational theory and structure as it relates to the health-care delivery institutions</td>
<td>85.33</td>
<td>High</td>
<td>0 0 1 9 5</td>
</tr>
<tr>
<td>3. Problem-solving methodology</td>
<td>84.00</td>
<td>High</td>
<td>0 2 0 6 7</td>
</tr>
<tr>
<td>10. Methodology for program evaluations</td>
<td>81.33</td>
<td>High</td>
<td>0 1 1 9 4</td>
</tr>
<tr>
<td>4. Models for rational decision-making</td>
<td>77.33</td>
<td>Moderate</td>
<td>1 1 2 6 5</td>
</tr>
<tr>
<td>8. Principles of management by objectives</td>
<td>77.33</td>
<td>Moderate</td>
<td>0 0 5 7 3</td>
</tr>
<tr>
<td>1. Procedures of public relations</td>
<td>70.67</td>
<td>Moderate</td>
<td>1 0 5 8 1</td>
</tr>
<tr>
<td>9. Survey methods</td>
<td>69.33</td>
<td>Low</td>
<td>0 2 5 7 1</td>
</tr>
<tr>
<td>7. Data Processing</td>
<td>61.33</td>
<td>Low</td>
<td>1 3 6 4 1</td>
</tr>
<tr>
<td>2. Fundamentals of manpower planning and development</td>
<td>60.00</td>
<td>Low</td>
<td>1 3 7 3 1</td>
</tr>
</tbody>
</table>
Communications

As shown in Table 6, the expert committee of health education professionals and practitioners gave a very high rating to the knowledge of written and oral communications (#2). Two items had a moderate rating: knowledge of public information methods (#1) and knowledge of basic medical terminology (#4). Given a low rating was the knowledge of a modern language (#3).
TABLE VI. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF COMMUNICATIONS.

<table>
<thead>
<tr>
<th>Items</th>
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</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Written and oral communications</td>
<td>92.00</td>
<td>Very High</td>
<td>0 0 1 4 10</td>
</tr>
<tr>
<td>1. Public information methods</td>
<td>74.67</td>
<td>Moderate</td>
<td>0 2 5 3 5</td>
</tr>
<tr>
<td>4. Basic medical terminology</td>
<td>73.33</td>
<td>Moderate</td>
<td>0 0 6 8 1</td>
</tr>
<tr>
<td>3. A modern language</td>
<td>61.33</td>
<td>Low</td>
<td>3 4 2 1 5</td>
</tr>
</tbody>
</table>
Organization for Health

As shown in Table 7, the expert committee members expressed a high rating for the knowledge of basic organization and functions of the health-care delivery institution's departments and services (#1).

Given a low rating were the knowledge of concepts of area planning and regionalization of resources for health-care delivery (#3) and knowledge of various processes and procedures in health-care delivery institutions for promoting quality of care (#2).

One item had a no priority rating; knowledge of principles of the development and maintenance of a medical library (#4).
TABLE VII. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF ORGANIZATION FOR HEALTH.

<table>
<thead>
<tr>
<th>Knowledge of:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic organization and functions of the health-care delivery institution's departments and services</td>
</tr>
<tr>
<td>3. Concepts of area planning and regionalization of resources for health-care delivery</td>
</tr>
<tr>
<td>2. Various processes and procedures in health-care delivery institutions for promoting quality of care</td>
</tr>
<tr>
<td>4. Principles of the development and maintenance of medical library</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic organization and functions of the health-care delivery institution's departments and services</td>
<td>81.33</td>
<td>High</td>
<td>0 0 4 6 5</td>
</tr>
<tr>
<td>3. Concepts of area planning and regionalization of resources for health-care delivery</td>
<td>68.00</td>
<td>Low</td>
<td>0 1 9 3 2</td>
</tr>
<tr>
<td>2. Various processes and procedures in health-care delivery institutions for promoting quality of care</td>
<td>66.67</td>
<td>Low</td>
<td>0 1 9 4 1</td>
</tr>
<tr>
<td>4. Principles of the development and maintenance of medical library</td>
<td>46.67</td>
<td>No</td>
<td>3 5 6 1 0</td>
</tr>
</tbody>
</table>
Health Sciences

As shown in Table 8, seven items were given a moderate priority rating: knowledge of fundamentals of consumer education (#13); knowledge of causation, prevention and control of major chronic diseases and impairments (#1); knowledge of environmental factors affecting health and diseases (#4); knowledge of fundamentals of nutrition (#7); knowledge of organizational structure and function of county, state, and federal health agencies (#14); knowledge of causation, prevention and control of specific communicable diseases (#2); and knowledge of principles of maternal and child health (#3).

The expert committee of health professionals and practitioners expressed seven low ratings: knowledge of principles and procedures of epidemiology (#8); knowledge of principles of mental health (#5); knowledge of principles of dental health; knowledge of principles of drug use, misuse, and abuse (#10); knowledge of fundamentals of first aid and cardiopulmonary resuscitation (#12); knowledge of occupational health (#9); and knowledge of principles of sex education (#11).

Although the expert committee members were concerned about these items, they did not represent very high priority items for them. It should be noted that one of the health education practitioners commented that "students preparing
TABLE VIII. INDEX OF IMPORTANCE, PRIORITY CLASSIFICATION, AND DISTRIBUTION OF RESPONSES FOR EXPRESSED LEVELS OF PROFICIENCY IN THE SUBJECT AREA OF HEALTH SCIENCES.

<table>
<thead>
<tr>
<th>Items</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Fundamentals of consumer education</td>
<td>78.67</td>
<td>Moderate</td>
<td>0 1 4 5 5</td>
</tr>
<tr>
<td>1. Causation, prevention and control of major chronic diseases and impairments</td>
<td>73.33</td>
<td>Moderate</td>
<td>0 0 7 6 2</td>
</tr>
<tr>
<td>4. Environmental factors affecting health and disease</td>
<td>73.33</td>
<td>Moderate</td>
<td>0 1 4 9 1</td>
</tr>
<tr>
<td>7. Fundamentals of nutrition</td>
<td>72.00</td>
<td>Moderate</td>
<td>0 1 5 8 1</td>
</tr>
<tr>
<td>14. Organizational structure and function of county, state, and federal health agencies</td>
<td>72.00</td>
<td>Moderate</td>
<td>0 1 7 4 3</td>
</tr>
<tr>
<td>2. Causation, prevention and control of specific communicable diseases</td>
<td>70.67</td>
<td>Moderate</td>
<td>0 1 7 5 2</td>
</tr>
<tr>
<td>3. Principles of maternal and child health</td>
<td>70.67</td>
<td>Moderate</td>
<td>0 0 7 8 0</td>
</tr>
<tr>
<td>8. Principles and procedures of epidemiology</td>
<td>69.33</td>
<td>Low</td>
<td>0 0 9 5 1</td>
</tr>
</tbody>
</table>
(Table 8 continued)

<table>
<thead>
<tr>
<th>Knowledge of:</th>
<th>Index</th>
<th>Priority</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Principles of mental health</td>
<td>68.00</td>
<td>Low</td>
<td>0 3 4 7 1</td>
</tr>
<tr>
<td>6. Principles of dental health</td>
<td>68.00</td>
<td>Low</td>
<td>0 2 6 6 1</td>
</tr>
<tr>
<td>10. Principles of drug use, misuse, and abuse</td>
<td>68.00</td>
<td>Low</td>
<td>0 1 7 7 0</td>
</tr>
<tr>
<td>12. Fundamentals of first aid and cardiopulmonary resuscitation</td>
<td>66.67</td>
<td>Low</td>
<td>0 1 9 4 1</td>
</tr>
<tr>
<td>9. Occupational health</td>
<td>65.33</td>
<td>Low</td>
<td>0 1 9 5 0</td>
</tr>
<tr>
<td>11. Principles of sex education</td>
<td>64.00</td>
<td>Low</td>
<td>0 3 6 6 0</td>
</tr>
</tbody>
</table>
for health education specialist positions in health-care delivery settings should be taught methods by which current theory can be translated into practice in real-life settings, emphasizing the nature and extent of current health education problems; possible relevance of contemporary educational theory to such problems and how modern communications technology can be used to translate such theory into practice." Another member of the expert committee stated that "a good health education specialist understands wellness from an experiential framework and deviations from an analytical one".
V. SUMMARY AND CONCLUSIONS

Summary of Problem and Procedures

The central purpose of this descriptive study was to determine the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be acquired by a person preparing for a position as health education specialist in a health-care delivery setting. Thus, this study was designed to establish a baseline of data regarding the guidelines for curriculum development in the professional preparation of health education specialists preparing for positions in health-care delivery settings.

The methods of research utilized in this study were the construction of a questionnaire; the pretesting and revision of the questionnaire; the distribution of the questionnaire to an expert panel of health professionals and practitioners to obtain specific judgments; and the statistical analysis of the data for the purpose of identifying fundamental knowledge, intellectual abilities and skills, methodologies, and techniques of relative importance to the academic professional preparation of health education specialists preparing for positions in health-care delivery settings.

Analysis of the data was first made by tabulating the responses to each item in each of the five response categories. Next, a weighted percentage, or "Index of Importance", was determined for each item. This percentage was used to develop
to develop the priority listings of the cognitive areas listed on the questionnaire. In addition to these data, the average of the weighted percentage for each of the seven subject areas was calculated.

**Relative Importance of Subject Matter Areas**

From the priorities established it appears that some subject areas were of greater priority to the expert panel than others. The subject areas were ranked as follows: (1) Education (80.50%); (2) Organizational Processes and Management (76.00%); (3) Behavioral Sciences (75.33%); (4) Communications (75.33%); (5) Health Sciences (70.00%); (6) Organization for Health (65.68%); and (7) Biological Sciences (58.67%). To determine the relative importance of each subject area in relation to the other areas an average of the weighted percentages of each subject area was calculated.

Based upon the priority ratings, those classified from high to very high, the greatest desired proficiency levels involve knowledge of: program implementation and management; written and oral communications; formulation of behavioral objectives; criteria for selection of health education materials appropriate for particular individuals and/or groups; values and attitudes which influence health behaviors; organizational theory and structure as it relates to the health-care delivery institutions; problem-solving
methodology; theories of teaching and learning; theories of motivation; methodology for program evaluations; community organization and development; and basic organization and function of the health-care delivery institution's departments and services.

**Implications**

It appears that many of the committee members believe that a health education specialist with a substantial academic background in the fundamental areas of education, organizational processes and management, communications, behavioral sciences, and health sciences is capable of assuming a health-care delivery setting position. Implied in this conviction is the belief that health education specialists should be selected on the basis of an analysis of the knowledge and skills required to perform tasks which produce measurable outcomes rather than on the basis of their title or traditional professional role. To bring about this belief it is essential to examine the forces and factors that administrators utilize in the selection of staff. To change the forces operating to shape this selection it is necessary to bring about changes in aspirations, feelings, beliefs, and attitudes concerning the nature and scope of the capabilities needed by health education specialists to function in health-care delivery settings.
Recommendations

This study was designed to establish a baseline of data regarding the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques of health education specialists preparing for positions in health-care delivery settings. These findings give direction to more in-depth, detailed research. Inasmuch as virtually no research has been done to identify areas of professional competence, the areas for research are vast. Research related to this study which would be of value include:

1. Identification of role statements of health education specialists in health-care delivery settings.

2. Development of methods to help health education specialists realistically prepare for their roles in health-care delivery settings.

3. Identification of ways to more effectively and efficiently involve health education specialists in health-care delivery settings.

It is hoped that the information provided by this study will help to stimulate thought and discussion among health education professionals for seeking more effective ways of meeting the educational needs of health education specialists preparing for positions in health-care delivery settings.


20. Ellis, John K. Professor of Health, Oregon State University. H 491E Selected Topics: Health-Care Delivery Systems. Fall Term 1975.


44. Public Papers of the Presidents. President Nixon's Health Message to Congress. February 1971.


77. White Paper. Patient health education and the operational role which insurance plans can assume in this area. August 1974. 5p.


APPENDICES
APPENDIX A

PRETEST PARTICIPANTS

Harold O. Burden, M.P.H., Director, Health Education, Adventist Hospital, Portland, Oregon.

Alice Dahlen, R.N., Director, Nursing Services, Meridian Park Hospital, Tualatin, Oregon.

Rick Delano, M.A., Assistant Administrator, Albany General Hospital, Albany, Oregon.

Eldon L. Erickson, M.D., Corvallis Clinic, Corvallis, Oregon.

Gayle Essex, R.N., Director, Patient Education, Rogue Valley Memorial Hospital, Medford, Oregon.

Judith Ladd, B.S.N., Graduate Student, Department of Health, Oregon State University, Corvallis, Oregon.

Mark J. Magenheim, M.D., Director, Benton County Health Department, and Medical Director, Heart of the Valley Center, Corvallis, Oregon.

Pam Malcom, R.N., Patient Education Coordinator, Good Samaritan Hospital, Corvallis, Oregon.

David W. Phelps, Ed.D., Professor, Department of Health, Oregon State University, Corvallis, Oregon.

Barbara J. Robertson, R.N., M.A., Administrator, Kaiser Foundation Sunnyside Medical Center, Clackamas, Oregon.
APPENDIX B

EXPERT COMMITTEE MEMBERS

Bettie L. Basye, R.N., M.P.H., MEDUCATORS, Corte Madera, California.

Harold O. Burden, M.P.H., Director, Health Education, Portland Adventist Hospital, Portland, Oregon.

G. David Burgess, M.S.P.H., Coordinator of Patient Health Education, Veterans Administration Hospital, Medical District 20, Temple, Texas.


Margo de la Vega, M.P.H., Health Educator, Kaiser Health Center, Oakland, California.

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Margaret B. Pollard, M.S.P.H., Public Health Coordinator, Wake Area Health Education Center, Raleigh, North Carolina.

Robert E. Randolph, M.P.H., Education Specialist and Consultant, Veterans Administration Hospital, Medical District 25, Tucson, Arizona.

Ruth F. Richards, M.P.H., Professor and Field Program Supervisor, School of Public Health, UCLA, Los Angeles, California.

Barbara J. Robertson, R.N., M.A., Administrator, Kaiser Foundation Sunnyside Medical Center, Clackamas, Oregon.
Barbara L. Sims, M.P.H., Director, Health Education, Corporation for Health Education in Appalachia, Athens, Ohio.

Helen L. Tinnin, M.P.H., Ph.D., Coordinator of Patient Education. Veterans Administration Hospitals, Medical District 8, Fayetteville, North Carolina.


Don L. Winders, M.P.H., Director, Health Education, Glendale Adventist Medical Center, Glendale, California.

Mort Wisotsky, B.A., Director of Education and Training, Mills Memorial Hospital, San Mateo, California.
APPENDIX C

QUESTIONNAIRE

I. Education. The subject area of education includes the factors which influence learning and retention, memory processes, concept formation and motivation of various age groups relative to educational settings and social limitations; interrelationships of attitudes, values, behaviors, and understandings; and formulation of behavioral objectives, curriculum construction, and methods for assessing the effectiveness of the educational process appropriate to various individuals and/or groups in the health-care delivery setting.

Knowledge of:

<table>
<thead>
<tr>
<th>PROFICIENCY LEVELS</th>
<th>(Circle One)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Theories of teaching and learning</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Educational research methods and design</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Formulation of behavioral objectives</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Curriculum construction</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Quantitative and qualitative educational evaluations</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Criteria for selection of health education materials appropriate for particular individuals and/or groups</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Selection and use of programmed instruction, audio-visual devices, methods, and materials for various individuals and/or groups</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
I. **Education.** (continued)

Knowledge of:

8. Procedures to determine the readability levels of printed materials designed for use by patients in health-care delivery institutions

II. **Behavioral Sciences.** The subject area of behavioral sciences includes emotional, psychological and sociological bases for human behavior; social organization and social change as these influence both health-care consumers and providers; and political structure and forces of the community in relation to the health-care delivery institution.

Knowledge of:

1. Principles of human growth and development

2. Behavioral modification and change strategies

3. Individual and group counseling methods and techniques

4. Values and attitudes which influence health behavior

5. Theories of motivation

6. Community organization and development

7. Social organization

8. Political structure and forces of the community
III. **Biological Sciences.** The subject area of biological sciences includes levels of human growth and development; and physical changes from birth to adulthood with considerations of deviations.

Knowledge of:

<table>
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<th>Proficiency Levels</th>
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</table>

1. Fundamentals of normal structure and function of human body systems

2. Basic principles of microbiology

3. Basic principles of laboratory methods and procedures

---

IV. **Organizational Processes and Management.** The subject area of organizational processes and management includes procedures for maintaining and promoting effective human public relations; factors influencing interpersonal and small group processes; techniques and functions of planning, program development processes and tools for program planning; resources allocations, budgets, and proposals; and consumer computer conversational language and computer applications relative to health-care delivery institutions.

Knowledge of:

<table>
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<th>Proficiency Levels</th>
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</table>

1. Procedures of public relations

2. Fundamentals of manpower planning and development

3. Problem-solving methodology
IV. Organizational Processes and Management. (continued)

Knowledge of:

4. Models for rational decision-making
5. Procedures for program implementation and management
6. Organizational theory and structure as it relates to the health-care delivery institutions
7. Data processing
8. Principles of management by objectives
9. Survey methods
10. Methodology for program implementation

V. Communications. The subject area of communications includes social, economic, and political barriers to channels of information; understanding of practical aspects of human oral communication and creative speaker-audience communications; various skills and forms used in preparing reports and writing articles for health-care delivery publications; planning and executing informational campaigns and methods of informing public of public affairs and other enterprises in which health-care consumers are interested; and insight into language as a basic manifestation of human culture.

Knowledge of:

1. Public information methods
2. Written and oral communications
V. Communications. (continued)

Knowledge of:

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<tr>
<th>PROFICIENCY LEVELS</th>
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</table>

3. A modern language
4. Basic medical terminology

VI. Organization for Health. The subject area of organization for health includes the public information, consumer-enrollee education, patient education and orientation training, continuing education components of a consumer comprehensive health education program in health-care delivery institutions; management tasks necessary for the planning, organization, implementation, development, operation, and evaluation of a formalized program of health education in direct health delivery systems; and relationships of the health education staff in the institution and the responsibilities of the education staff in helping with the development and implementation of programs for orientation training and continuing education of the institution's personnel.

Knowledge of:

<table>
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<tr>
<th>PROFICIENCY LEVELS</th>
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<td>(Circle One)</td>
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</table>

1. Basic organization and functions of the health-care delivery institution's departments and services
2. Various processes and procedures in health-care delivery institutions for promoting quality of care
3. Concepts of area planning and regionalization of resources for health-care delivery
4. Principles of the development and maintenance of medical library
VII. **Health Sciences.** The subject area of health sciences includes health principles and practices directed toward the development, maintenance, and protection of maternal, infant, child, adult, and senior citizen health promotion; and modern concepts of prevention and control of common communicable and specific chronic diseases.

Knowledge of:

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>PROFICIENCY LEVELS (Circle One)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Causation, prevention and control of major chronic diseases and impairments</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Causation, prevention and control of specific communicable diseases</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Principles of maternal and child health</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Environmental factors affecting health and disease</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Principles of mental health</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>6. Principles of dental health</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Fundamentals of nutrition</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Principles and procedures of epidemiology</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Occupational health</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Principles of drug use, misuse, and abuse</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>11. Principles of sex education</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
VII. Health Sciences. (continued)

Knowledge of:

12. Fundamentals of first aid and cardiopulmonary resuscitation

13. Fundamentals of consumer education

14. Organizational structure and function of county, state, and federal health agencies

VIII. Additional topics and/or comments.
APPENDIX D

INSTRUCTIONS FOR COMPLETING QUESTIONNAIRE

1. Read each item.

2. Respond to each item by circling the rating (1, 2, 3, 4, 5) that most closely represents your feelings.

Your answers and comments will be kept confidential and only summarized results of this study will be used in any published report. If after filling out the entire questionnaire, there is any additional information or comments that you wish to add, please use the space provided at the end of questionnaire. Any such information will be most welcomed and considered a valuable addition to this study.

The following numbers will be used for the level of academic preparation proficiency ratings:

1. No Proficiency
2. Slight Proficiency
3. Moderate Proficiency
4. Considerable Proficiency
5. Complete Proficiency

Your cooperation in responding to the following items by December 24 will be appreciated. Please return the completed questionnaire to me in the self-addressed stamped envelope provided for your convenience.
APPENDIX E

PERSONAL DATA FORM

Purpose: The purpose of this questionnaire is to seek your assistance in providing information that will be useful in the development of curriculum guidelines for health education specialist preparing for positions in health-care delivery settings.

The following questions are included to provide an informational profile of respondents:

NAME ____________________________________________

INSTITUTION ________________________________________

1. What kind of institution or agency do you work?
   ( ) Federal government  ( ) Private non-profit
   ( ) State government   ( ) Unemployed
   ( ) County government  ( ) Other __________________

2. What is your primary responsibility in your agency?
   ( ) Director of Health Education
   ( ) Patient Educator
   ( ) Health Educator
   ( ) Other __________________

3. What is your area of professional specialization?
   ( ) Administration  ( ) Psychology
   ( ) Health Education ( ) Researcher
   ( ) Medicine           ( ) Social Work
   ( ) Nursing            ( ) Statistics
   ( ) Pharmacy           ( ) Other __________________

4. What is your type of professional preparation? (Specify)
   ( ) Associate degree
   ( ) Baccalaureate degree
   ( ) Master degree
   ( ) Doctorate degree
   ( ) Certificate or registration in __________________

5. How long have you been employed as a health professional?
   ( ) Less than 1 year  ( ) 7-10 years
   ( ) 1-3 years        ( ) More than 10 years
   ( ) 4-6 years
APPENDIX F

INTRODUCTION LETTER

November 10, 1976

Dear

I am a Master of Science candidate in the Department of Health at Oregon State University. In attempting to determine the fundamental areas of professional competence and unique skills which health education specialists must acquire to assume leadership in the development, implementation, and evaluation of hospital-based health education programs, I have drafted a questionnaire.

The central problem of the above-mentioned study is to determine the fundamental knowledge, intellectual abilities and skills, methodologies, and techniques which should be acquired by a person preparing for a position as health education specialist in a health-care delivery setting as a basis for curriculum development. This study is designed to help elucidate the role of the health education specialist; thus, the results from this research will be of value to the state of Oregon, the nation, and academic institutions throughout the country which are in the process of developing or revising academic training programs for the health education specialist.

Your willingness to serve as a member of the expert panel of jurors for this study will be greatly appreciated. Please complete and return the self-addressed postcard within three to five days. Thank you for your cooperation.

Redacted for privacy

Debra A. Niemie

Enclosure

I consent to participate in this study. At a later date questionnaire will be mailed.

I do not consent to participate in this study.

(signed)
December 10, 1976

TO: Expert panel of jurors
FROM: Debra A. Niemie
RE: Completion of questionnaire

This is to acknowledge receipt of your consent to participate in my study. Enclosed is questionnaire designed to provide information that will be useful in the development of curriculum guidelines for health education specialists preparing for positions in health-care delivery settings.

Your willingness to serve as a member of my expert committee of health practitioners for this study is greatly appreciated. Please return completed questionnaire in the self-addressed stamped envelope by December 24.

Thanks for your cooperation and time.
December 27, 1976

Dear

This letter is in reference to the questionnaire that was mailed to you December 10, regarding the academic preparation of health education specialists. As of yet I have not received sufficient responses to fulfill the needs of my study. Perhaps this questionnaire has been misplaced during your busy schedule. If this questionnaire is still in your possession, I would appreciate it very much if you would complete it as soon as possible and return it to me. Your cooperation and willingness to participate in this study will be greatly appreciated.

If you have completed your questionnaire, kindly disregard this letter.

Thank you.

Sincerely,

Debra A. Niemie
Department of Health
Oregon State University
Corvallis, Oregon 97331