IDENTIFICATION OF A MODEL MASTERS DEGREE IN NURSING FOR THE COMMUNITY-BASED PRIMARY HEALTH CARE NURSE PRACTITIONER

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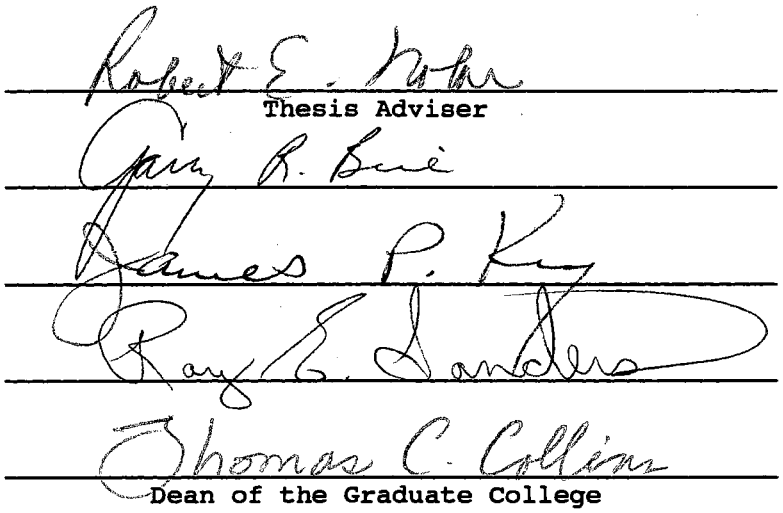

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For national health care reform to be successful there must be parallel education reform to prepare nurse practitioners with the skills needed to function effectively in a new and changing health care delivery system. This research project was undertaken in the hope of achieving a shared vision on the necessary education modules and components at the masters level to prepare professional nurses as community-based primary health care nurse practitioners.

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TABLE OF CONTENTS

Chapter Page

Chapter Page

LIST OF TABLES

Table Page

Table Page

LIST OF FIGURES

CHAPTER I

INTRODUCTION

The United States is in the process of creating its own future fortified only with lessons from the past. . . In a very real sense, tomorrow is now (Roosevelt, 1963). America's successes and failures serve as beacons to policy makers lighting the way toward a reformed health care system that better meets societal expectations (Bevis, 1989a).

Americans believe that all individuals are created equal and should be entitled to certain unalienable rights. Furthermore, it is the responsibility of a democratic government to guarantee the individual's right to life, liberty, and the pursuit of happiness (Hughes, 1948). Thus, a health care system within a democracy must also support similar exemplar truths and offer each individual the right to primary health care regardless of age, social position, or wealth (Timby & Lewis, 1992). Individuals seeking health care enter a high cost delivery system with fragmented services, limited access, and questionable quality of care (Lindeman, 1992).

The belief that health is an unalienable right in a democracy with vast societal ills and inadequate access to affordable health care prompts the public to demand major reform ("ANA to Actively," 1993; Tanner, 1990). In response to societal demands for a restructured delivery system, President Clinton's health plan

affords individuals the right to health and universal access to affordable care. Specifically, the Clinton administration's health care reform redirects the delivery of primary health care services from physicians to nurse practitioners working in community-based settings ("AMA Thinks Twice," 1993; "AMA to Study," 1993). The greater utilization of primary health care nurse practitioners recreates a health care system that ensures universal access, high quality, and affordable services (Watson & Phillips, 1992).

The Clinton administration advocates nurse practitioners an opportunity for new practice privileges and broader roles in a reformed health care system ("AMA Thinks Twice," 1993). The anticipated national health care reform and expanded role of nurses as primary health care providers in community-based settings mandates concurrent educational transformation (Bevis, 1989b; Watson & Phillips, 1992).

Educators must immediately evaluate the impact of health care reform on nursing practice and graduate education to meet America's need for universal access to primary health care services (Betts, 1993). National health care reform will shift the focus of health care from a costly illness system to one that emphasizes primary health care services and promotion, restoration, and maintenance of health. Health care reform will directly impact nursing practice and challenge the nurse practitioner to deliver cost-effective primary health care services in non-traditional settings such as schools, community clinics, and workplaces (Palmer, 1992).

The vast changes taking place in the American society in general and its health care system in particular augment the role and demand for a community-based primary health care practitioner with a masters degree in nursing (Betts, 1993; Department of Health and Human Services, 1990; de Tornyay, 1992; Hegyvary, 1992; Lindeman, 1992; Watson & Phillips, 1992). Individual state autonomy affords a wide variation in the nurse practitioner's academic preparation and fosters divergent views on the development of a professional graduate preparation for nurses (Morgan, 1993; Schlotfeldt, 1985; Waters, 1989; Watson & Phillips, 1992).

Under the present system each state board of nursing exercises legal control over the educational programming and licensure of nurse practitioners. The nurse practitioner's educational qualifications vary nationwide and may include a graduate degree in nursing, other formal nursing education, non-degree continuing education study, and/or clinical experience ("Guidelines," 1993; McCanse, 1993a; National League for Nursing, 1993b; "NLN Members Back," 1993 Price, Martin, Newberry, Zimmer, Brykezynski, & Warren, 1992; "Regulation Changes," 1993). The U.S. Department of Health and Human Services Division of Nursing's national survey revealed the highest nursing degree held by nurse practitioners included: diploma (21.4 percent); associate's degree (11.4 percent); baccalaureate (33 percent); master's (34 percent); and doctorate (0.3 percent) (Moses, 1990).

The diversity of academic preparation prompted the American Medical Association (AMA) to question the educational qualifications of the nurse practitioner to assume the role of primary health care provider. Specifically, the AMA questioned the ability of the nurse practitioner to prescribe narcotics and act as gatekeepers in primary health care ("AMA Thinks Twice," 1993).

To address the impact of national health care reform on nursing practice and the concerns of the American Medical Association the National League for Nursing (NLN) advocates a graduate degree in nursing for the advanced nurse practitioner. The NLN has recommended a masters degree in nursing (MSN) as the minimal educational requirement and national standard for advanced nursing practice ("NLN Members Back," 1993).

Preparing professional nurses at the graduate level to meet the challenges of providing primary health care in community-based settings will require curricula revision and the development of a model program ("NLN Members Back," 1993). Educators teaching the various nursing programs utilize a patchwork approach to determine the required courses of study (Schlotfeldt, 1985). Curriculum guidelines and clinical opportunities are selected in accordance to the applicable state board of nursing regulations and nurse practice act ("Guidelines," 1993; "Regulations," 1993). It is the wide latitude among programs in the development and offering of professional knowledge basic to the practice of nursing that has fostered the inadequacies in the body of knowledge currently being taught in America's nursing programs (Schlotfeldt, 1985).

In response to national health care reform nursing school curricula must shift from an emphasis purely on teaching nursing skills to equipping graduates with a working knowledge of care management processes and team collaboration (McCanse, 1993a). The graduate nursing curricula for the primary health care nurse practitioner must also include a minimum of 3500 actual clinical hours (J. C. Haggerty, personal communication, July 14, 1994).

The logic for national health care reform calls for simultaneous education reform and acknowledging that the patchwork approaches to nursing educational models have not worked. The inadequacies of the health care system and nursing education prompt the need for the development of a national model for post-baccalaureate nursing education (Watson & Phillips, 1992).

The federal government's call for an interdisciplinary nursing approach to health care confirms the increase in demand for primary health care nurse practitioners who have had graduate preparation that includes specialized knowledge and skills ("NLN Members Back," 1993; Price et al., 1992; Rosenfeld, 1993b). Nurse practitioners providing primary health care services in community-based settings require a model masters degree program in nursing that focuses on prevention and wellness rather than the current medical-illness model that exists in nursing today ("As Reform Nears," 1993; "Health Care Issues," 1993; Kenyon, Smith, Hefty, Bell, McNeil, & Martaus, 1990; "Two Nursing Groups," 1993).

Primary health care nurse practitioners working in community-based settings require graduate education that reflects: 1) the multifaceted needs of the surrounding communities; 2) health promotion; 3) professional leadership, and 4) management of nursing practice (Hegyvary, 1992; National League for Nursing, 1991; Price et al, 1992; Schoultz, Hatcher, & Hurrell, 1992).

Enactment of national health care reform affords nurses a chance of a lifetime to become primary health care providers ("As Reform Nears," 1993). The time is now for nurses to reenvision the past, reconstruct its lessons, and envision the future (Chinn, 1991). Only through educational transformation can educators prepare a truly professional nurse who provides a quality of nursing care not yet realized in a reformed health care system (Bevis, 1989b).

Problem Statement

President Clinton's health plan affords individuals the right to health and universal access to affordable care by redirecting the delivery of primary health care services from physicians to nurse practitioners working in community-based settings ("Nursing Braces," 1993). In other words, clients seeking basic medical and health care services would be directed to a community-based nurse practitioner for evaluation and management of symptoms, appropriate referrals, disease prevention, and health maintenance ("ANA to Actively," 1993; Mahoney, 1992; McCanse, 1993b; Millis, 1977; "UMKC Meets," 1994; U.S. Department of Health, Education, and Welfare, 1971).

But reshaping the Nation's health care delivery system also mandates parallel educational reform. Registered nurses preparing for advanced clinical practice in community-based settings as nurse practitioners require graduate programming that differs from what exists in nursing today. The problem can be stated thus: based upon the literature review, curricula models to prepare professional nurses as primary health care practitioners to work in community-based settings are inconsistent.

Need for the Study

National health care reform requires parallel reform in nursing education to prepare nurse practitioners to provide primary health care services in community-based settings (Watson & Phillips, 1992). The nurse practitioner working in a reformed delivery system must have the ability to apply technology, knowledge, and a broad range of primary health care theories within the discipline of nursing to meet societal health care expectations (Price et al., 1992).

Educators must look beyond the prevailing medical illness model that exists in nursing today to effectively prepare professional nurses to be primary health care nurse practitioners in community-based settings (Kenyon et al., 1990). As a shared vision does not yet exist for a primary health care nurse practitioner graduate program, it is necessary to identify the masters preparation necessary to prepare professional nurses as primary health care nurse practitioners ("NLN Members Back," 1993). The American Association of Colleges of Nursing and National League for Nursing

advocate a graduate degree in nursing as the minimal educational requirement for the community-based nurse practitioner to insure competence and quality of care (Connors, 1994; Mezey, 1986; "NLN Members Back," 1993).

The development of an exemplary masters program to prepare primary care nurse practitioners could benefit schools of nursing to: 1) envision graduate programming in a new light; 2) facilitate educational reform, and 3) meet societal health care expectations.

Purpose of Study

The purpose of the study is to identify through expert consensus a model masters degree program in nursing (MSN) to prepare professional nurses as primary health care nurse practitioners to work in community-based settings.

Research Questions

1. What education modules are necessary at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings?

2. What are the necessary components of the education modules at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings?

Limitations

1. This study is limited to the perception of a panel of health care experts participating in a modified delphi study.

Delimitations

1. A model masters program in nursing (MSN) will be identified for only the nurse practitioner that provides primary health care services in community-based settings.

Assumptions

1. National health care reform will radically reshape the delivery system of health care services.

2. Nurse practitioners working in a reformed health care system will receive new practice privileges and expanded roles.

Definitions

American Nurses' Association (ANA): An organization of registered nurses representing the "official voice" for professional nursing in the United States (Rosdahl, 1991). The ANA fosters high standards of nursing practice and promotes educational and professional advancement of nurses to better assure client care (Kozier, Erb, & Bufalino, 1989).

Associate Degree Program: A two year basic nursing education program affiliated with junior and community colleges leading to an associate degree in nursing (National League for Nursing (NLN), 1993a).

Autonomy: The state of being self-directed, responsible, and accountable for one's actions (Kozier et al., 1989).

Baccalaureate Nursing Degree (BSN): A four year course of study with a nursing major at a college or university leading to a baccalaureate degree (NLN, 1993a).

Client: The recipient of health care services.

Clinical Experience: Actual observation, care, and management of clients in a health care setting.

Community-based settings: A point of entry into the health care system where individuals receive universal access to primary health care services from nurse practitioners.

Continuing Education Study: A short-term nondegree instructive program designed to enhance the nurse's knowledge or skills in a specific area. Upon completion the participants receive a certificate or specialization (Kozier et al., 1989).

Diploma Programs: A hospital-based three year basic nursing program leading to a diploma in nursing (NLN, 1993a).

Education Component: Curriculum content of a unit of instruction.

Element: A constituent of an education component.

Education Module: A unit of instruction covering a single topic.

Expanded Role: A pattern of behavior beyond the traditional limits of nursing practice that a nurse assumes by virtue of education, experience, and changes in legislation.

Formal Nursing Education: Basic registered nurse programs that include diploma, associate degree, and baccalaureate degree.

Graduate Education: A master of science degree in nursing (MSN) that prepares professional nurses as primary health care nurse practitioners to work in community-based settings.

Health Care System: A network of institutions, facilities, and agencies that provide restorative and preventive services to individuals (Kozier et al., 1989; Timby & Lewis, 1992).

Health Promotion: The acquisition of mental, physical, and spiritual assets to move the client toward high-level wellness and protect from disease (Black & Matassarin-Jacobs, 1993).

Medical-Illness Model: The diagnosis and treatment of disease using a problem-solving approach to bring the client to the beginning of wellness. This model focuses on the physical and biologic aspects of specific diseases and conditions (Glanze, Anderson, & Anderson, 1990).

National League for Nursing (NLN): The national organization that accredits nursing education programs, administers preadmission and achievement testing to nursing students, and compiles statistical data on health care delivery trends (Glanze et al., 1990). Members of the NLN include health care agencies, nurses, non-nurses who strive to improve health care and nursing education in the United States (NLN, 1993a).

Nurse Practitioner: A registered nurse with a graduate degree in nursing or a related area that provides specialized knowledge and skills ("Advanced Registered", 1994).

Nursing: "The diagnosis and treatment of human responses to actual and potential health problems" (American Nurses' Association (ANA), 1980, p. 9).

Nursing Practice: The registered nurse's use of knowledge, skill, and the nursing process to provide services in the prevention, diagnosis, and treatment of illness, and the maintenance of health. In addition, the scope of practice is defined by the nurse's role, education, experience, nature of the client population, and practice setting (ANA, 1987).

Primary Health Care Services: Health care benefits provided by a nurse practitioner that emphasize the promotion of health, early diagnosis of disease or disability, teaching, and prevention of disease ("Advanced Registered", 1994; Glanze et al., 1990).

Professional Nurse: A registered nurse with a baccalaureate or higher degree in nursing (Rosdahl, 1991).

Registered Nurse: A graduate from a basic nursing program who has successfully completed the National Council Licensure examination (NCLEX-RN) and holds a current license to practice professional nursing within a state.

State Board of Nursing: A state agency that exercises legal control over nursing schools, curricula, and licensure of nurses within that state (NLN, 1993a).

Summary

An overview of the need for national health care reform and parallel reform in nursing education has been presented. The

community-based primary health care nurse practitioner with a master's degree in nursing has been identified from the literature review as an essential link to provide universal access to health care. Yet a shared vision does not exist on the graduate education necessary to prepare professional nurses as community-based primary health care nurse practitioners.

Chapter I also identified the nature of the problem, problem statement, and the need for this study. Assumptions, limitations, and delimitations were also presented. Two research questions were asked regarding what education modules and components are necessary at the masters level to prepare professional nurses as community-based primary health care nurse practitioners. Operational and conceptual definitions of pertinent terms were also given.

Chapter II examines the literature review to identify the necessary education modules and components for a model masters degree in nursing to prepare the community-based primary health nurse practitioner.

CHAPTER II

REVIEW OF RELATED LITERATURE

The American Health Care System

Health Care and Nursing Education Reform

National Health Care Reform must address the efficiencies of the current health care system, escalating health care costs, and health-compromising behaviors. Only through fundamental restructuring of the health care delivery system will Americans be assured of universal access to affordable quality health care that promotes health and disease prevention (Black & Matassarin-Jacobs, 1993; Brunner & Suddarth, 1989; Deets, 1993; Dougherty, 1988; Lee, 1994; Mundinger, 1994; Porter-O'Grady, 1994; White, 1993).

More Americans lack access to quality primary health care than ever before. Between 31 and 37 million Americans lack health care coverage and another 20 million live with less than adequate health care coverage. Of the estimated 31 to 37 million Americans without health insurance 70 percent are the working uninsured because the employer can not afford the insurance premiums and 30 percent are unemployed or medically uninsurable (Deets, 1993; Palmer, 1992; White, 1993; Wright, 1993).

Individuals without adequate insurance coverage, in the context of escalating health care costs, have limited access to health care services except in emergencies. Hence, the uninsured individual delays seeking health care and enters the health care delivery system in a state of a medical or surgical crisis. The client's delay in seeking treatment ultimately results in higher health care costs, denial of provider reimbursement for indigent care, and health care costs are being shifted to the taxpayers (Palmer, 1992; Todd, 1993; White, 1993; Wright, 1993).

The health care crisis requires a new balance in public policy that values health, early intervention, and client self-responsibility ("AMA Assails," 1994; Leifer, 1993, "What Creates Health?" 1994). Prevalent health problems in the United States are the result of health-compromising environments and personal behaviors (Public Health Service, Department of Health and Human Services, 1990). By the year 2010, America will spend approximately 28.5 percent of the gross national product on health care problems that could have been prevented through primary health care or preventive medical services (Bezold, Carlson, & Peck, 1986; Craig & Weiss, 1990). In fact, all of the 10 most common causes of death arise from conditions that can be prevented or reduced to manageable levels through adequate primary health care intervention ("AMA Assails," 1994; Fontanarosa, 1994; Marsh, 1994b).

To improve the nation's health, the American people must view health as a personal responsibility and receive universal access to affordable readily available primary health care services such as

health prevention, diagnostic procedures, treatment referrals, and client counseling (Kelly, 1991). The health care system of the future must also be responsive to the unique multicultural needs of individuals, families, and communities (Pender, 1993).

A health oriented-care system that responses to the client's multicultural needs and places greater emphasis on health promotion and disease prevention requires nurse practitioners to learn new interventions and assume greater responsibility in the delivery of services (Pender, Barkauskas, Hayman, Rice, & Anderson, 1992). To fulfill the goals of national health care reform primary health care nurse practitioners must be capable of providing proactive prevention, health education, counseling/support, managed care, and establishing empowering client partnerships ("AMA Assails," 1994; Kohn, 1993).

Nurse practitioners working in community-based settings are the single most important group of health care providers who can play a key role in the movement toward proactive health care and the establishment of empowering partnerships between schools, families, and the greater community (Uphold & Graham, 1993). Consequently, the present curriculum for nurse practitioners must be revised to reflect the restructured health care system's new emphasis on health promotion and disease prevention (Pender et al., 1992).

President Clinton's Health Security Plan

President Clinton's health security plan provides universal access to health care, encourages consumer participation, balances the need to contain costs against the need to provide quality health services, and increases the demand for nurse practitioners with a masters degree in nursing (Heimericks, 1993; "Nursing's Concerns," 1993).

National health care reform will restructure America's health care system from the traditional disease-orientation to one of health-orientation by: 1) enhancing the consumer's access to services by delivering critical primary health care services in both rural and urban communities; 2) fostering consumer responsibility for personal health, self-care, and informed decision-making, and 3) facilitating the utilization of a cost-effective provider of primary health care, the nurse practitioner. All Americans will receive a nationally guaranteed standard package of benefits that include primary care, health screening, and preventive care services (Griffith, 1993; "Health Care Reform," 1993; "President Unveils," 1993; "The Clinton Health," 1993; "What Will Reform," 1993).

Clinton's health plan recognizes the current trend toward health promotion and places a greater emphasis on preventive care, a concept that has long been recognized as the best way to reduce health care costs (Dumas, 1993; Marsh, 1994b; Rosenfeld & Post, 1993). A cornerstone of Clinton's proposal to reduce escalating

health care costs and limited accessibility to quality health services will be the greater utilization of the community-based nurse practitioner to deliver primary health care services including health education and preventive medicine ("ANA Delegates," 1993; "As Reform Nears," 1993; "Hillary Clinton Pays," 1993; "President Budgets," 1993; "President Unveils," 1993; Young & Sharma, 1993).

Primary Health Care

Primary health care is the care a client receives at the first point of contact with the health-care system that leads to a decision on how to resolve a presenting health problem. Primary health care also includes ongoing preventive health care, treating minor illness, early diagnosis of disease, management of chronic conditions, and health maintenance ("Advanced Registered," 1994; Heimericks, 1994).

Historically, primary health care has been haphazardly managed by health care practitioners who did not assume full responsibility for the delivery of care. Mismanaged delivery of primary health care has resulted in fragmented, high-cost, uncoordinated, and impersonal care (Freeman & Heinrich, 1981).

America's health care model is an illness-intensive, technologically sophisticated system of treatment processes that focus on intervention rather than prevention (Mundinger, 1994; Porter-O'Grady, 1994). However, a fragmented, depersonalized, and high-cost health care delivery system, which places greater emphasis on acute hospital care than on community-based primary health care,

is no longer acceptable to Americans as the ideal model for organizing and providing health care services (Wright, 1993).

President's Clinton's health security plan addresses escalating health care costs and barriers to the delivery of quality care by emphasizing changes in the delivery system and expanding the use of primary health care and preventive medicine (Young & Sharma, 1993). Under the reformed system nurse practitioners will deliver community-based primary health care to the general public, rural communities, and medically indigent populations ("As Reform Nears," 1993; "Facing Off," 1993; Mallison, 1991; McCanse, 1993c; Oermann, 1994; Pender, 1993; "President Unveils," 1993).

The concept of accessible primary health care provides the necessary framework for a reformed delivery system as the health of a nation stems from the health of individuals, families, and communities. Health for all instead of health for a select few represents the ultimate goal of primary health care under Clinton's health security plan. Therefore, primary health care leads to the progressive improvement in the health of all people ("President Unveils," 1993; Shoultz et al., 1992).

The United States has a great need for primary health care providers. Of the doctors graduating from America's medical schools only 14.6 percent are specializing in primary health care ("Joint Program," 1993; McCanse, 1993c; "Nursing Changes Bring," 1993). The American Nurse's Association predicted that the shortage of primary health care physicians will continue over the next 50 years ("AMA Assails," 1994).

The shortage of primary health care physicians has given rise to the recommendation at the state and national levels to use mid-level practitioners both as a response to access problems and to reduce health care costs ("AMA to Study," 1993). Mid-level practitioners educated as nurse practitioners furnish cost effective health care services to clients and families in underserved areas. As fewer physicians enter primary health care practice, nurse practitioners are becoming increasingly in demand as valuable providers of preventive and primary health care services (Argondizzo & Miller, 1986; Bramble, 1994; "Joint Program," 1993; Marsh, 1994a; McCanse, 1993c; Mundinger, 1994; Nursing Changes Bring," 1993; Porter-O'Grady, 1994).

Health Promotion

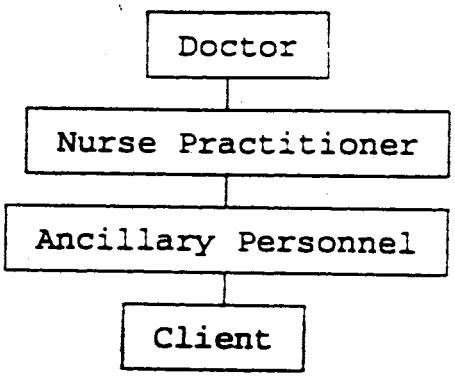
Health promotion, a part of preventive and primary health care services, raises the level of health and well-being of an individual, family, and community (Kozier et al., 1989; Timby & Lewis, 1992). The process of health promotion fosters awareness, influences attitudes, and identifies alternatives to improve and maintain a state of wellness through lifestyle modification (Black & Matassarin-Jacobs, 1993; Kozier, 1989).

Health promotion strategies encourage the client to participate in a collaborative decision-making practice model by making informed choices and behavioral changes to achieve an optimal level of health and changes in the environment (Black & Matassarin-Jacobs, 1993). The utilization of a collaborative decision-making model rather than

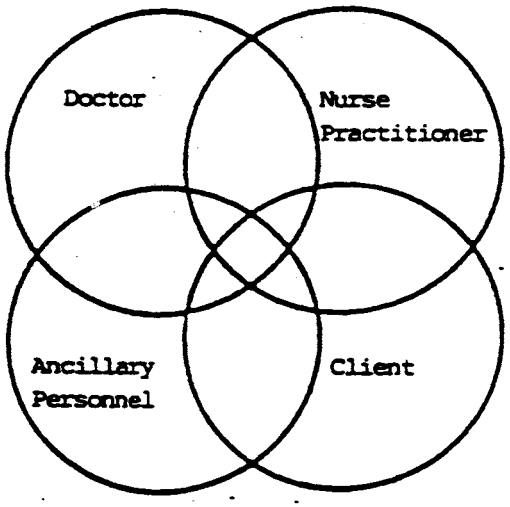
a traditional practice model promotes shared participation, responsibility, and accountability between the client and health care team in a delivery system that is striving to meet the complex needs of the public (Brunner & Suddarth, 1992; McCanse, 1993a). Figure 1 represents a comparison between the traditional practice model and a collaborative-decision making model.

As a result of health promotion the community acquires assets that buffers the populace from disease and promotes a high-level of wellness. By achieving a high-level of wellness the community functions at its best level. Assisting people to reach and stay at a high-level of wellness is the goal of the primary health care nurse practitioner (Black & Matassarin-Jacobs, 1993). Health promotion strategies consequently involve nursing approaches, actions, and activities whose end is high-level of wellness (Black & Matassarin-Jacobs, 1993; Dunn, 1961; Kozier, 1989).

The role of the primary health care nurse practitioner provides substantial opportunities for the integration of a variety of health promotion and disease prevention services into client encounters. The relative autonomy of the primary health care nurse practitioner and scope of responsibility among individuals, families, and communities across multiple life transitions creates a climate and expectation for holistic care that places a strong emphasis on health promotion. Through unique, personal interactions with individuals, families, and communities the primary health care nurse practitioner identifies needs and opportunities for health promotion



A. Traditional Practice Model



B. Collaborative Decision-Making Practice Model

Source: Brummer and Suddarth, 1992.

Figure 1. Comparison of a Traditional Practice Model (A) and a Collaborative Decision-Making Practice Model (B)

and disease prevention and implements relevant strategies and programs to meet the population's needs (Pender et al., 1992).

The Expanded Role of the Nurse Practitioner

The Clinton administration recognizes the unique role nurses play within the health care system, and the important role nurse practitioners can play in containing health care costs ("ANA Delegates," 1993; Clinton, 1993; Mallison, 1992; "President Budgets," 1993; "President Unveils," 1993). Nurse practitioners can provide affordable care because the delivery of preventive and primary health care does not require the expensive specialization that characterizes physician education (Heimericks, 1994).

At least three-quarters of adult primary health care and up to nine-tenths of pediatric primary health care could be supplied by nurse practitioners at major savings in cost. By turning primary health care over to community-based nurse practitioners the United States could save an estimated one-half to one billion dollars annually and improve quality of care (Mallison, 1992).

The restructuring of the health care delivery system from the traditional disease orientation to community-based primary and preventive health care will expand access to care, alter the role of nursing and change the education process (Connors, 1994; Nugent & Lambert, 1994). Under President Clinton's health security plan the nurse practitioner will engage in the delivery of primary

health care and preventive services to a much greater extent in nurse managed community-based clinics ("ANA to Actively," 1993; "Facing Off," 1993; "Nursing Braces," 1993). Nurse practitioners working in nurse managed community-based clinics will deliver primary health care services according to written protocols established between the nurse practitioner and a collaborating physician, but the physician's presence will not be required (Marsh, 1994a).

Under a nurse-physician collaborative practice model the role of the community-based nurse practitioners will include

1. evaluation of the client's physical and psychosocial health status through a comprehensive health history and physical examination and using diagnostic instruments or laboratory procedures;

2. assessment of normal and abnormal findings from the health history, physical examination, and laboratory reports;

3. consulting with the client and members of the health care team to afford ongoing primary health care services and treatment referral;

4. planning, implementing, and evaluating health promotion strategies and primary health care services for individuals, families or groups;

5. recommending specific health promotion strategies such as stress management, nutrition education, weight control, life-style modification, stop-smoking clinics, the wearing of helmets by motorcyclists, and organized physical activity programs;

6. delivery of health-oriented services such as immunizations, prenatal clinics and well-baby clinics in community-based settings;

7. surveillance and management of acute and chronic illnesses based upon protocols adopted jointly by the nurse practitioner and collaborating physician;

8. initiation and maintenance of accurate records, appropriate legal documents and other health and nursing care reports;

9. development of individualized teaching plans with the client based on overt and covert health needs;

10. counseling individuals, families, and groups about health promotion, illness, and health maintenance;

11. recognizing, developing, and implementing professional and community educational programs related to primary health care;

12. management of health promotion programs such as evaluation/ screening, participatory behavior change, educational/motivational, and organizational enhancement programs;

13. participation in periodic and joint evaluation of services rendered and revision of adopted protocols for primary health care services ("Advanced Registered," 1994; "ANA to Actively," 1993; "Facing Off," 1993; Kohn, 1993; Kozier et al., 1989; Mahoney, 1992; Marsh, 1994a; McCanse, 1993b; Moore & Williamson, 1984; Opatz, 1985; "UMKC Meets," 1994).

As a community-based primary health care provider, the nurse practitioner undoubtedly becomes the person whom the client will

first turn to for health promotion and disease prevention (Marsh, 1994a; Freeman & Heinrich, 1981). When the individual client or family enters the health care system, seeking primary health care for a particular episode of illness, general health problem or disability, the community-based nurse practitioner will ascertain the client's needs; determine the appropriate action; provide immediate assessment or care, and serve as a triage agent to direct referrals. The community-based primary health care nurse practitioner thus becomes a strong link between the client, community, and the health care system ("ANA to Actively," 1993; Freeman & Heinrich, 1981; Mahoney, 1992).

Nursing Education

Links Between Health Care Reform and Educational Reform

The focus of national health care reform on disease prevention and health promotion is a most promising redirection for nursing (Mundinger, 1994). Health care reform will certainly require nurse practitioners to work in a complex multidisciplinary health care system and deliver primary health care to a greater variety of clients (Betts, 1993). Community-based nurse practitioners will provide primary health care services now afforded by physicians (McCanse, 1993c; "NLN Members Back," 1993; Price et al., 1992; Rosenfeld, 1993b).

The opportunity for the nurse practitioner to provide primary health care is an inherently vulnerable one if the profession does

not change its focus, strategy, tactics, goals, and educational model (de Tornyay, 1993; Dumas, 1993; Mundinger, 1994). The focus of nursing service needs to quickly move from institutional service structures to community-based service models if nursing is to reflect the changing character of health care over the next two decades (McCanse, 1993b; "Nursing's Concerns," 1993; Porter-O'Grady, 1994).

The education of nurse practitioners will have to shift significantly, from preparing nurses for fairly stable inpatient environments to educating nurses for highly variable continuum of service-based delivery constructs that resemble none of the characteristics of the traditional hospital setting. Critical to the success and survival of the nurse practitioner will be the ability to operate in an interdisciplinary team approach to promote health (de Tornyay, 1993; Porter-O'Grady, 1994).

The demands of a restructured health care system require primary health care nurse practitioners to have specialized knowledge and skills, however, such nurses hardly exist today (Flanagan, 1994; Hegyvary, 1992; Oermann, 1994).

Curriculum models used to develop nursing education programs in the past are inadequate for the future. Over the past 40 years, the nursing profession has embraced a Tylerian approach to curriculum development, which is characterized by establishing program goals and course objectives and evaluation methods that ascertain whether or not the objectives have been met. Because the Tylerian approach is based on specific behavioral theory,

learning is assessed only in relation to specific behavioral outcomes (Bevis & Murray, 1990; Hills, Lindsey, Chisamore, Bassett-Smith, Abbott, Fournier-Chalmers, 1994; Tanner, 1990).

Nursing's attempt to make the Tylerian approach uniformly applicable to all nursing curriculum limits curriculum exploration to the behaviorist theory (Bevis & Watson, 1989). With the implementation of national health care reform, the empiricist/behaviorist curriculum paradigm presently used in nursing will be antithetical to development of nurse practitioners for the future (Hills et al., 1994).

Bevis & Watson (1989) suggested that a methodology for curriculum development is needed to prepare substantively different nurse practitioners. Nurse educators throughout the United States also confirmed that a curriculum revolution is needed to bring about the kinds of change that are essential to educate nurse practitioners for the future (Bevis, 1988; Diekelmann, 1988; Moccia, 1988; Tanner, 1988; Watson, 1988).

The central theme in the curriculum reform movement is the preparation of nurse practitioners with new and different perspectives and abilities who can function well in a rapidly changing health care environment (MacLeod & Farrell, 1994). An education model for the preparation of nurse practitioners must reflect a different framework for practice and broader base of clinical understanding (de Tornyay, 1993; Keane & Richmond, 1993; Porter O'Grady, 1994).

The provision of primary health care in a restructured delivery system requires educators to envision a new type of professional preparation, at the masters level, to prepare professional nurses with specialized knowledge and skills (Connors, 1994; Mezey, 1986; "NLN Members Back," 1993; Price et al., 1992; Rosenfeld, 1993a).

The recognition of the nurse practitioner to provide primary health care services challenges nurse educators to develop an education model that focuses on prevention and wellness rather than the current medical-illness model ("Health Care Issues," 1993; Goldberg, 1994; Hills et al., 1994; Shoultz, 1992; Taylor, Barrick, & Harrell, 1994). To facilitate the change of focus from illness-centered care to community-based health promotion will mandate a long overdue fundamental restructuring of the complex and fractionated system of nursing education (Dumas, 1993; Goldberg, 1994).

Nursing educators across the nation have started to discuss the development of a five-year basic nursing education curriculum, requiring a masters degree for entry into practice (McCanse, 1993b). However, there is still great controversy and lack of clarity on the development of a professional educational model for the nurse practitioner (Goldberg, 1994; Mezey, 1986; Morgan, 1993; Newman, Sime, Corcoran-Perry, 1991; Schlotfeldt, 1985; Waters, 1989; Watson & Phillips, 1992).

The divisions within the nursing profession threaten the success of health care reform and enhances the gap between nursing education and practice (Dumas, 1993; MacLeod & Farrell, 1994). Collaboration

is needed then, for the enhancement of clinical practice, the education of nurse practitioners, and the development of relevant nursing knowledge (MacLeod & Farrell, 1994).

Professional nurses educated in a conceptual model that does not address community-based primary health care will not be adequately prepared to provide services in a reformed delivery system (de Tornyay, 1993; Dumas, 1993). Consequently, America's health care delivery system will continue to waste human resources, financial resources, human potential, and nursing talent (Watson & Phillips, 1992).

To assure all Americans the right to a health care delivery system that provides quality primary health care the nurse practitioner must be utilized to maximum potential. Nurse educators must therefore re-examine the academic process and priorities in light of reform to achieve a shared vision on a model masters program (Betts, 1993; Mezey, 1986; "Reform Reaction," 1993; "Retraining Needed," 1994).

The opportunity for new practice privileges demands major shifts in the current nursing education and practice toward community-based health promotion and disease prevention. Nursing practice in a reformed health care system will transform the delivery of health promotion and disease prevention services to nurse practitioners working in community-based settings (Betts, 1993; McCanse, 1993d; "Retraining Needed," 1994). The Department of Health and Human Services (1988) has predicted that by the year 2020 the need for nurse practitioners in the community/public health practice will

increase 115.6 percent. New practice privileges and broader roles in a restructured health care system increases the need for graduate education and raises questions on the adequacy of the current conceptual framework to prepare community-based primary health care nurse practitioners ("AMA Thinks Twice," 1993).

Conceptual Framework

A community-based practice requires a nursing framework that emphasizes holistic health care and offers a health-oriented and prevention-centered focus (Mahoney, 1992). However, it is difficult to select an existing conceptual model or nursing theory to envision a new type of professional preparation at the masters level to educate the community-based primary health care nurse practitioner ("NLN Members Back," 1993).

Current nursing theories project what the theorist believes nursing should be and do not always reflect reality. In fact, no existing theory adequately addresses the reality of practice for the nurse practitioner in the management of primary health care or the complexities of the health care team ("Theory and Primary," 1984). Conceptual models and nursing theories must accurately reflect the new practice privileges of the nurse practitioner in order to afford a curriculum model that addresses primary health care services such as health promotion and disease prevention among individuals, families, and communities (Pender, et al., 1992).

Existing nurse practitioner programs select nursing theories or conceptual models to prepare generalists in the delivery of

health care. The academic preparation of the nurse practitioner assumes a general practitioner approach to client problems (Brunner & Suddarth, 1992; Diers & Molde, 1983). Although specialization of nurse practitioners have been long evident, the issue for the future curriculum is how to accommodate further shifts in emphasis from a generalist to a more specialized preparation in community-based health promotion (Mezey, 1986).

Current Educational Requirements

A highly bureaucratic, territorial, fragmented, and rigid model for illness-centered care dominates nursing curriculum (de Tornyay, 1990). Individuals entering the academic setting receive a content laden curriculum that emphasizes the full gamut of scientific, medical technology, communication, and cultural topics (McCanse, 1993b).

The profession of nursing utilizes self-regulation to establish standards of practice, nursing ethics, and a system of academic preparation for nurse practitioners. In turn, each state adopts its own nurse practice act to establish minimum educational and competency standards ("Advanced Registered," 1994; DeAngelis, 1994; "Guidelines," 1993; Kozier et al., 1989). Each state board of nursing therefore exercises legal control over the academic preparation and licensure of nurse practitioners ("Advanced Registered," 1994; Dunbar, 1986; NLN, 1993a; "NLN Members Back," 1993; Price et al., 1992; "Regulation Changes," 1993).

Individual state autonomy accounts for the wide variation in the definition of the nurse practitioner, as well as the form and length of nurse practitioner education ("Guidelines," 1993; Morgan, 1993; Schlotfeldt, 1985; Waters, 1989; Watson & Phillips, 1992). Current educational requirements for nurse practitioners vary from only informal training to masters degree in nursing (Morgan, 1993; Morgan & Trolinger, 1994). Only Oregon and Utah currently require a masters degree for nurse practitioners. Connecticut and West Virginia, however, have indicated that a masters degree will be required for all nurse practitioners beginning January 1995 and January 1999 respectively (Pearson, 1992).

The U.S. Department of Health and Human Services Division of Nursing's national survey further demonstrated the divergent views held by the states on the definition of who may qualify as a nurse practitioner and the lack of agreement on a masters degree as an entry level requirement. Based upon the Division of Nursing's survey results the highest degrees held by nurse practitioners were diploma (21.4 percent); associate degree (11.4 percent); baccalaureate (33 percent); masters (34 percent); and doctorate (0.3 percent) (Moses, 1990).

Trend Toward Graduate Level Preparation

The lack of standardization in academic preparation among nurse practitioners has prompted the American Medical Association (AMA) Board of Trustees to question the educational qualifications of

nurses to provide community-based primary care as outlined in Clinton's health care reform ("AMA Assails," 1994; "AMA Thinks Twice," 1993; "Facing Off," 1993; McCanse, 1993a). However, since 1992 the educational trend for the nurse practitioner has been a shift from certificate programs to the master's degree ("Facing Off," 1993; Sultz, Henry, Kinyon, Buck, & Bullough, 1983).

New practice privileges and broader roles for the community-based primary health care nurse practitioner support the need for specialized knowledge that is best acquired in a masters program. The American Nurses' Association House of Delegates have adopted a resolution that established 1992 as the target date by which all programs preparing nurse practitioners should be at the graduate level (ANA, 1985; "AMA Thinks Twice," 1993). The American Association of Colleges of Nursing and National League for Nursing also advocates a graduate degree in nursing as the minimal educational requirement for the community-based primary health care nurse practitioner to insure competence and quality of care (Connors, 1994; Mezey, 1986; "NLN Members Back," 1993).

Existing Masters Degree Programs for Nurse Practitioners

The trend toward graduate education is also evident when comparing the number of masters programs and nursing graduates. Nationwide the number of masters programs has steadily increased from 151 in 1982 to 236 in 1991. Likewise, the number of masters prepared nurses continues to increase. For the 1990-91, academic

year 6,555 registered nurses graduated from masters programs in nursing representing a five percent increase over the previous year (NLN Division of Research, 1993b).

Of the current 236 masters programs across the United States, only 92 or 38.9 percent offer nurse practitioner preparation. The most prevalent specialty offerings available for the nurse practitioner included family health; pediatrics, gerontology, and adult health which rank first, second, third, and fourth respectively. However, only 56 programs offered family health specialization (NLN, 1993b).

Masters programs currently preparing nurse practitioners have three curriculum components: 1) content required for all nurses prepared at the masters level; 2) core content appropriate for all nurse practitioners, and 3) component of content reflective of specialty preparation. It is within the three curriculum components that changes in preparation will need to be addressed (Mezey, 1986). The content presented at the masters level fluctuates depending on the program's philosophy and conceptual framework, NLN accreditation guidelines, and state board of nursing regulations ("Advanced Registered," 1994; NLN, 1993b; Secretary's Committee to Study Extended Roles for Nurses, 1972).

Previous research on the current curricula being used for the nurse practitioner has been conducted by two organizations: 1) the American Nurses' Association Council of Clinical Nurse Specialist (CCNS) and Council of Primary Health Care Nurse

Practitioners (CPHCNP) and 2) the National Organization of Nurse Practitioner Faculties.

During the spring of 1987, the American Nurses' Association CCNS and CPHCNP assessed the differences of the nurse practitioner and clinical nurse specialists academic preparation through a national survey. Findings from the 1987 national survey were based upon responses from 317 programs with subspecialties of gerontology and pediatrics. Five other subspecialties included family, adult, psychiatric/mental health, community, and women's health were not examined because there were too few programs to provide meaningful data. However, data analysis did reveal the current core curricula for the nurse practitioner with a specialty in gerontology and pediatrics (see Figure 2) (Forbes, Rafson, Spross, & Kozlowski, 1990).

In 1988, the National Organization of Nurse Practitioner Faculties (NONPF) developed national guidelines for nurse practitioner education. An ad hoc education committee (AHEC) appointed by the National Organization of Nurse Practitioner Faculties reviewed existing nurse practitioner education curricula. Previous research conducted by Brykczynski in 1985, on nurse practitioner curriculum guidelines and role were adopted by the NONPF as the conceptual framework to develop a model for advanced practice (Price et al., 1992).

Philosophical view for the research conducted by AHEC was based upon the American Nurses' Association (ANA) and National League for Nursing (NLN) recommendations. Specifically, advanced practice is

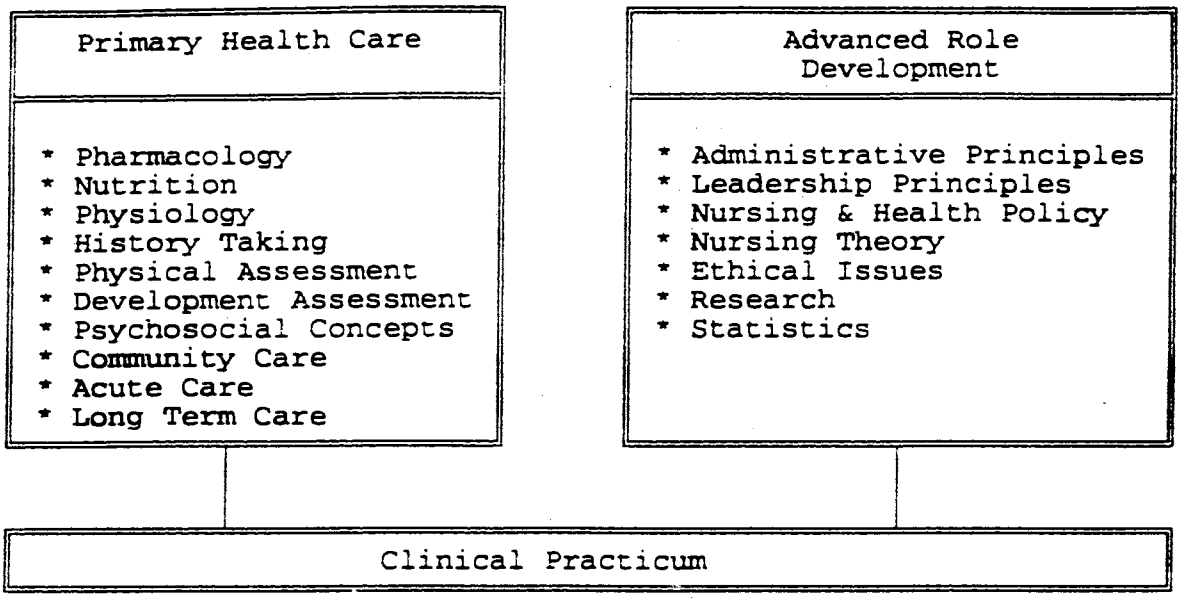


Figure 2. Nurse Practitioner Core Curricula Gerontology and Prediatrics SPecialty American Nurses' Association Survey Graduate Nursing Programs

based on a generalist baccalaureate preparation in nursing and that curricula for advanced practice must provide a theoretical and research base specific to the practice area. In addition, the AHEC model based the curricular guidelines on the assumption that the nurse practitioner curricula must provide specific role development by including integrated clinical learning opportunities (Price et al., 1992).

Prior to developing the new curricular guidelines the AHEC evaluated examples of current nurse practitioner curricula from universities and colleges in Texas, Michigan, Indiana, Virginia, Washington, Mississippi, Oregon, and California (see Figure 3). The curricular review was felt to be necessary and helpful in consolidating ideas about the nurse practitioner educational content. The AHEC then conducted a review of related literature to identify the nurse practitioners practice role and the competencies required to function effectively (Price et al., 1992)

At the conclusion of the research project the AHEC identified and considered five domains of practice for specific content, objectives, and competencies (see Figure 4). The AHEC also determined that the nurse practitioner role must be clearly identified as one who is competent in providing primary health care services with comprehensive, competent clinical skills and the ability to work effectively within complex, interdisciplinary health care delivery systems. The curricular framework must support a focus of nursing care that perceives client management from the

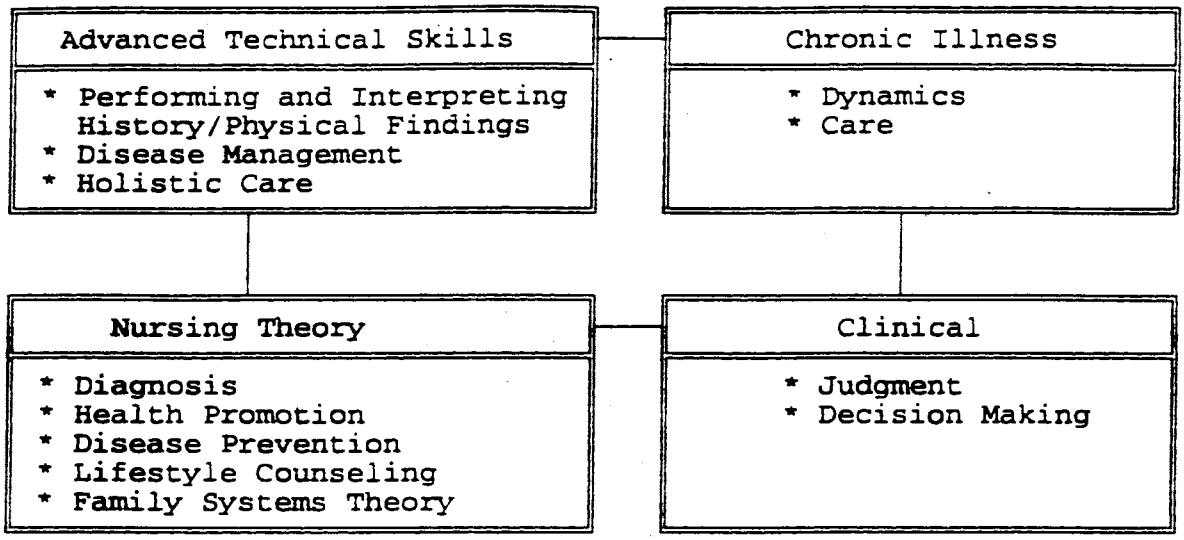


Figure 3. Current Nurse Practitioner Curricula Certification and Master's Level Selected Universities and Colleges

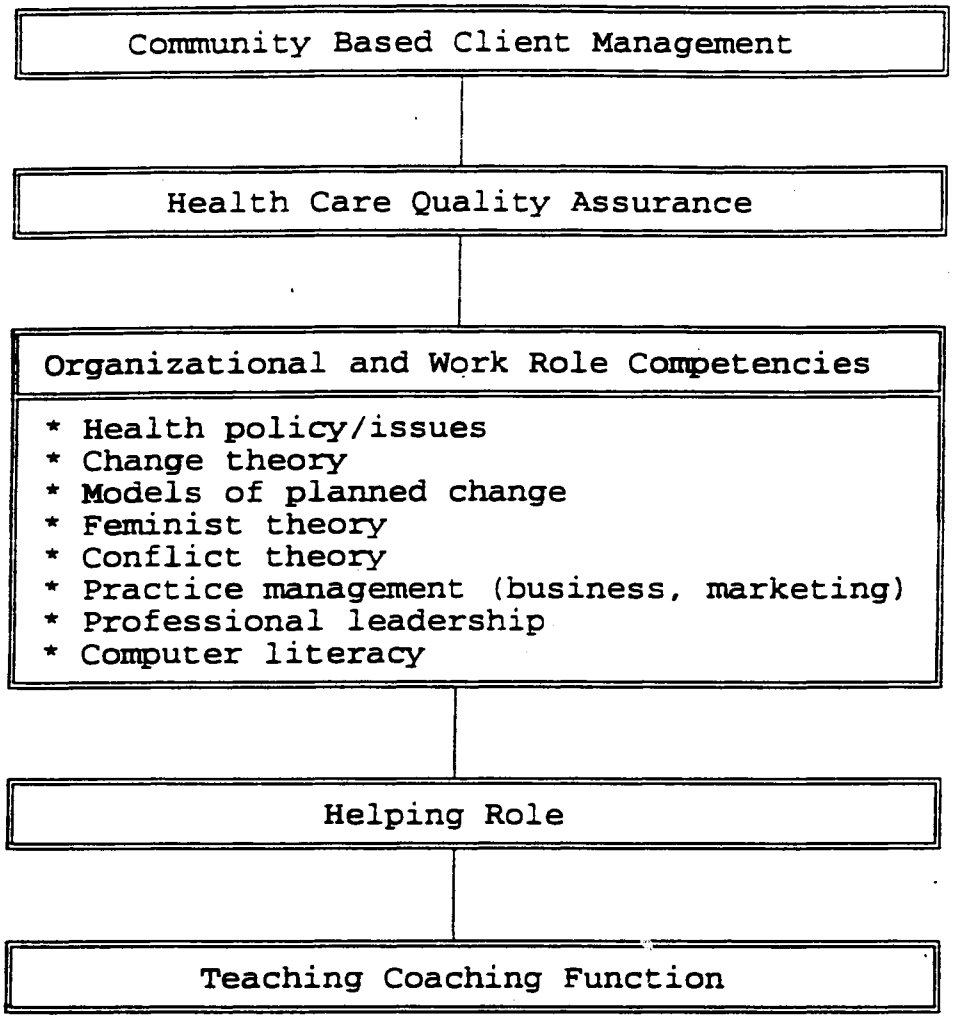


Figure 4. Practice Domains for the Nurse Practitoner (Adopted from Brykczynski's Work)

perspective of wellness, illness prevention, and maintenance of optimal wellness (Price et al., 1992).

Model Masters Degree Program

Curriculum Revision

In creating a model masters degree program for nurse practitioners, educators are challenged to retain all that is valuable in the current instructional processes while developing new ways of organizing knowledge, research, and client care (de Tornyay, 1993).

Tragically, schools of nursing have abandoned the wellness model in favor of the medical-illness model because of the structuring of state board licensure examination (Shoultz, 1992). The curricular development necessary to prepare the nurse practitioner for today should combine the theoretic basis of advanced practice nursing care with a clinical practicum (Keane & Richmond, 1993; Mezey, 1986). But embarking upon curriculum revision can be a formidable task (Price et al., 1992).

Clearly there is a need for educators to respond to and adequately prepare nurse practitioners to provide specialized care (Keane & Richmond, 1993). To develop curricular guidelines for the community-based primary health care nurse practitioner one should consider the traditional components of any curriculum such as nursing philosophy, assumptions, and conceptual framework (Price et al., 1992).

The basic curriculum for the community-based nurse practitioner must be built on a sound body of nursing knowledge (Kessenich, 1992). Aspects critical to the delivery of primary health care by the nurse practitioner in a community-based setting includes an in-depth knowledge and skills of primary health care services including health promotion, disease prevention, advanced assessment skills, diagnostic capabilities, critical thinking, and leadership expectations (de Tornyay, 1993; Keane & Richmond, 1993; Kessenich, 1992; Price et al., 1992).

To afford individuals, families, and communities cost-effective primary health care services requires a change in focus from an exclusive disease orientation to health promotion and health maintenance (Friedman, 1992; Koch & Maserang, 1994). The American Nurses' Association recognizes that health care reform will shift the current structure of individual, illness-centered care to one of population, community-based interventions ("As Reform Nears," 1993; Koch & Maserang, 1994; Taylor et al., 1994).

The shift from the traditional medical-model paradigm to cost-effective community-based interventions requires the development of a conceptual model based upon a well-delineated nursing theory and in-depth understanding of nursing practice in a reformed delivery system ("Two Nursing Groups," 1993).

Nursing Curriculum Recommendations

The National Council for the Education of Health Professionals has made board recommendations to direct the development of a

nursing curriculum to reflect health promotion and disease prevention (Pender et al., 1992).

Based upon professional experience, research, and careful review of the recommendations from the National Council for Education of Health Professions Pender et al., (1992) suggested the a curricula emphasis for health promotion and disease prevention content for a masters degree program (see Figure 5).

The review of literature also supported the following recommendations for curricular components:

1. Scientific base for primary health care nurse practitioner role. Future curriculum development should afford the nurse practitioner a background in biological, behavioral, and social sciences. This background should incorporate both general and specific knowledge of areas that are critical to comprehensive assessment and client management such as anatomy, physiology, pathophysiology, pharmacology, nutrition, and family systems (Keane & Richmond, 1993; Mezey, 1986).

2. Clinical Practicum. To prepare nurse practitioners to deliver comprehensive client assessment, evaluation, and clinical management mandates the structure of the clinical practicum to include in-depth physical assessment, interpretation of diagnostic tests, decision-making, and guided supervision by a preceptor team consisting of a medical specialist and an advanced practice nursing specialist (de Tornyay, 1993; Keane & Richmond, 1993).

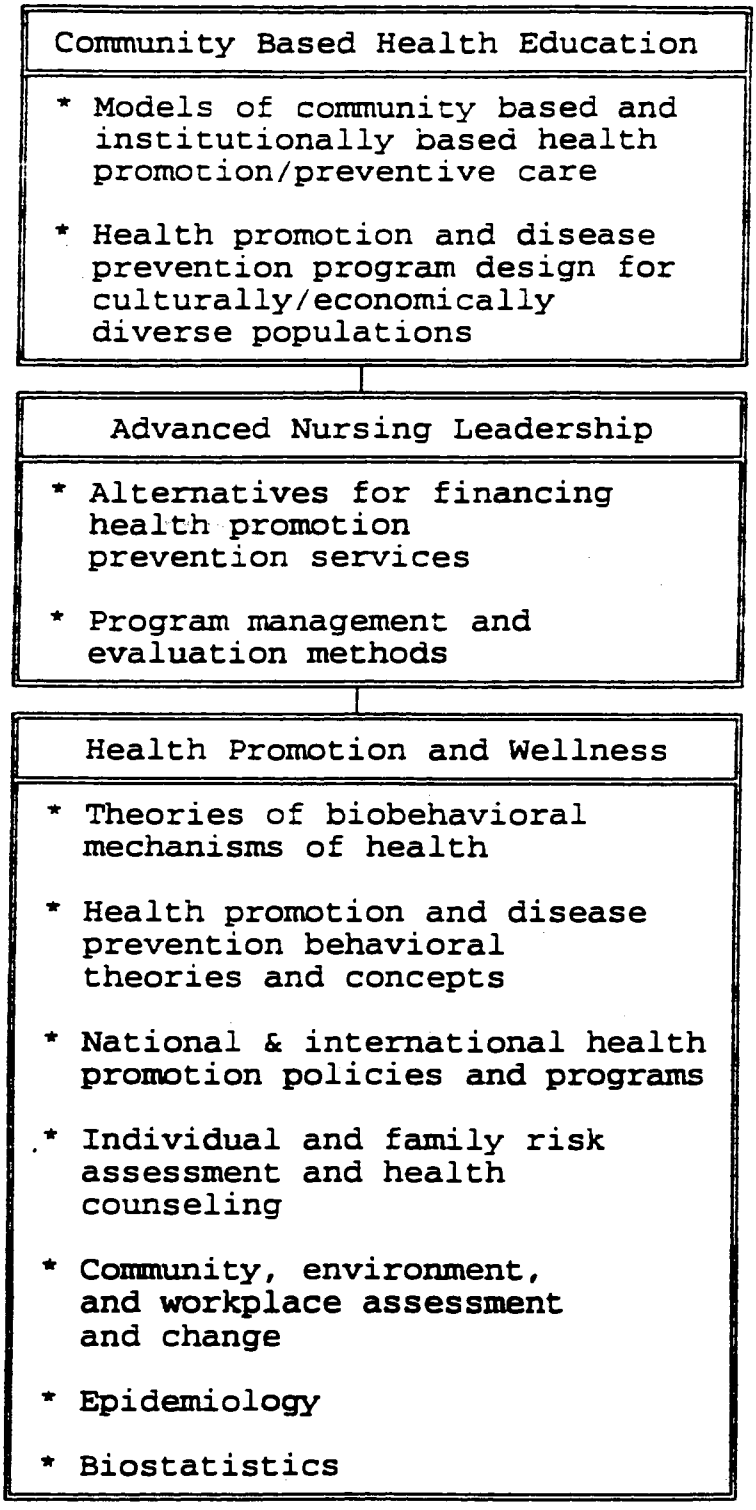


Figure 5. National Council for Education of Health Professions Recommendations for Graduate Curricula

Developing the nurse practitioner's skills in health promotion, prevention of illness, and management of both acute and chronic illness requires the integration of community-based experiences and advanced physical/clinical assessment throughout the curriculum (Oermann, 1994).

3. Community-based health promotion and wellness. To raise the client's level of health and well-being also requires the nurse practitioner to have a broad perspective of the culture, values, and norms of the community. Clinical management opportunities should include experiences in identifying and accessing resources within the community and working with groups and organizations to promote health (Oermann, 1994).

4. Role Development. The curriculum should likewise afford sufficient content to allow the nurse practitioner to compile: a data base on individuals and family members; the process of clinical decision-making, and components of the role such as health promotion and maintenance, teaching strategies, and collaborative practice issues (Mezey, 1986). To fully understand nursing's role with a community-based system, it is also important for nurse practitioners to have a course addressing health care needs of specific populations at risk and application activities (Koch & Maserang, 1994).

5. Advanced Nursing Leadership. Addressing the health care needs of the community requires analytic, change agent, leadership and management skills, and knowledge of nurse practice acts. To assist the nurse practitioner to develop analytic and change agent

skills educators must include current and pending legislation and nursing strategies to influence local, state, and federal legislation (Keane & Richmond, 1993; Mezey, 1986).

In redesigning the curriculum educators should consider leadership theories, types of leadership, and components of effective leadership. Similarly the curriculum should include management topics such as planning, organizing, controlling, evaluating, staffing, and directing (Taylor et al., 1994).

The revised framework for practice and broader base of clinical understanding requires a graduate level curriculum that also places more emphasis on issues such as policy development, fiscal management, interdisciplinary collaboration, negotiation, community assessment, and program planning and evaluation (Flanagan, 1994; Glick & King, 1994; McCanse, 1993e; Shoultz et al., 1992). In addition, historical development of the nurse practitioner role, socioeconomic and political issues, legal parameters, and professional organizations that influence the client and nurse practitioner should be included in a masters program (Keane & Richmond, 1993; Mezey, 1986).

6. Provide primary health care management. National health care reform mandates educational reform that provides the nurse practitioner greater depth in community-based managed care, especially in the measurement of health outcomes ("Reform Reaction," 1993; Watson & Phillips, 1992). Graduating students will implement the primary health care nurse practitioner role in a variety of ways. For this reason, models, issues, and

strategies for primary health care management should be explored in detail in order to facilitate a successful transition of the student in the clinical role (Keane & Richmond, 1993; Mezey, 1986).

An education model that exclusively prepares the nurse practitioner for advanced clinical practice is inadequate. When identifying a model masters program careful thought must be given to the scope of nursing practice. Anticipating an interdependent practice in community-based settings requires the development of education components that prepare nurse practitioners to work effectively within a system of care (Keane & Richmond, 1993). System focused education components require the development of knowledge and skill to:

1. Provide a broad range of services to clients and families, Inherent to the nurse practitioner's role is the ability to adequately assess a wide range of actual or potential health problems; interpret data and formulate an informed opinion based on contrasting individual client characteristics against knowledge derived from physical, psychological, social, and cultural variables; initiate a comprehensive plan of care that includes health promotion, treatment, guidance and counseling, education, and referral; maintain contact with the client and coordinate care; and be seen as a colleague by other collaborative professionals (Mezey, 1986).

2. Promote interdisciplinary team collaboration. To advocate the nurse's image as a colleague rather than physician handmaiden requires the nurse practitioner to be proficient in the concepts of

teamwork, multidisciplinary planning, and collaboration decision-making (de Tornyay, 1993; Larson, 1992; McCanse, 1993e).

3. Participate in a collaborative decision-making practice model. Nurse practitioners providing primary health care must be highly competent, interdependent practitioners that can participate in a collaborative decision-making practice model. Moreover, nurse practitioners must demonstrate the ability to contend with a great deal of variety in the practice setting and require very little supervision in the service arena (Flanagan, 1994; Hegyvary, 1992; Oermann, 1994; Rosenfeld, 1993a).

4. Afford universal access to quality primary health care delivery. Interdependent nurse practitioners must possess the knowledge and skill to enhance mobilization of quality primary health care services and community resources to meet the holistic needs of individuals and families (Betts, 1993; Bevis & Watson, 1989; Harris, 1993; Keane & Richmond, 1993; McCanse, 1993e; Rush, 1992).

5. Assume the role of client advocate. To afford the availability of high quality primary health care services requires the nurse practitioner to advocate the client's right to health care. The role of client advocate also encompasses the development of community-based health education programs to foster consumer responsibility for personal health, self-care, and informed decision-making.

The community-based nurse practitioner must be responsive to societal needs, successful in humanizing the highly technological

milieus of health care, compassionate, caring, and insightful about health care issues (Betts, 1993; Bevis & Watson, 1989; Harris, 1993; Keane & Richmond, 1993; McCanse, 1993e; Rush, 1992).

6. Analyze and influence societal, legislative, and economic issues. The provision of primary health care in a restructured delivery system requires nurse practitioners to be cognizant of existing laws and regulations that influence nursing practice. As a professional citizen of the community the nurse practitioner must command the ability to analyze and influence issues that affect the client and nursing practice (Keane & Richmond, 1993).

7. Formulate scholarly approaches to client problems and issues. To meet the challenges of nursing practice in the 21st century the nurse practitioner must demonstrate higher level cognitive abilities such as critical, creative, and reflective thinking (Betts, 1993; Bevis & Watson, 1989; Harris, 1993; McCanse, 1993e; Rush, 1992). Nurse practitioners providing primary health care services in a community context must also be capable of integrating large data sets that cross micro and macro levels (e.g. individual, family, and community) (Flanagan, 1994; Hegyvary, 1992; Oermann, 1994).

Nurse practitioners must demonstrate refined technological, assessment, astute decision making, and critical thinking skills rarely necessary 25 years ago when nursing focused more on improving client comfort, following relatively simple physician's orders and maintaining charts (McCanse, 1993b; Rosenfeld, 1993a). Indeed, the level of responsibility for community-based primary

health care nurse practitioner requires complex, graduate education that is different from what already exists in nursing (Heimericks, 1993; Hegyvary, 1992 McCanse, 1993b; Rosenfeld, 1993a).

An exemplary masters program must support the development of the nurse practitioner and reflect the anticipated scope of practice ("NLN Members Back," 1993). Education reform in response to the changing health care paradigm must be balanced, focused, and will require more than adding a course in health promotion to the curriculum (Lindeman, 1993). Thus, it is necessary to identify the academic preparation required to prepare professional nurses as primary health care nurse practitioners ("NLN Members Back," 1993).

A unique aspect of developing a model masters program intended for national audience is the need to identify and offer the essential core education modules. By presenting the essential education modules for the community-based primary health care nurse practitioner the model program will have broad scope for relevance and utility (Price et al., 1992).

Summary

The review of literature has presented an overview of President Clinton's health care security plan and the need for parallel reform in nursing education to prepare community-based primary care nurse practitioners. Existing nurse practitioner programs utilize a conceptual framework based on individual theory or opinion and do not reflect an expert consensus. The development of a model masters degree program will afford educators a shared vision on the

necessary education modules and components to prepare professional nurses as primary health care practitioners. In addition, a model masters program will uniformly prepare professional nurses at the graduate level and provide the nurse practitioner the required expertise to dispense primary health care services to clients in a reformed delivery system.

Chapter III presents the research methodology, instrument use in the study, pilot study, population and sample, data collection, and statistical analyses utilized to develop a new type of professional preparation at the masters level for community-based primary health care nurse practitioners.

CHAPTER III

RESEARCH METHODOLOGY

Introduction

As discussed more fully in Chapter II, professional nurses preparing to work in community-based settings as primary health care nurse practitioners require graduate education that differs from what exists in nursing today. A three round questionnaire (modified delphi technique) was selected to achieve a group consensus on the degree of importance of the proposed education modules/components. The purpose of the research design was to identify a model masters degree program in nursing (MSN) to prepare professional nurses to work in community-based settings as primary health care nurse practitioners.

Chapter III presents the research methodology and is divided into the following sections: Sample, Research Design, Instruments Used in the Study, Pilot Study, Data Collection, Statistical Analyses, and Summary.

Sample

The delphi panel sample was first clearly defined and delimited in order to establish exact boundaries for assuring discreetness to the population (Leedy, 1993). To purposively select a panel of experts

with expertise in health/education reform and primary health care the review of literature was consulted.

Written correspondence was submitted to the Kansas, Oklahoma, and Missouri State Boards of Nursing requesting a copy of the respective registry mailing lists identifying primary health care nurse practitioners (See Appendix G). Only the Kansas State Board of Nursing was able to identify individuals who were registered to practice as primary health care nurse practitioners. The registry list from the Kansas State Board of Nursing identified a total of 14 primary health care nurse practitioners residing in Kansas, Missouri, and Texas.

Purposive sampling was then utilized to select a panel of health care professionals from the review of the literature and the Kansas State Board of Nursing Registry List. As recommended by the Oklahoma State University Advisory Committee the number of delphi participants exceed 20. The purposively selected participants were recognized by the profession as having a high level of expertise in health care and professional education reform and primary health care. Members of the panel selected were also geographically distributed throughout various regions of the United States and Canada. As recommended by Waltz, Strickland & Lenz (1984) the panel included a variety of personalities, interests, perceptions, and demographics in order to avoid bias responses.

Research Design

A modified delphi method was selected for this study because it is a research tool designed to generate a group consensus for

planning curriculum development and collating the structure of a model. The use of a modified delphi technique was consistent with similar educational research projects seeking a group consensus for the purpose of decision-making.

To identify the relevant education modules and components for a model masters degree program in nursing, a three round questionnaire was utilized to generate a group consensus. Each mailed questionnaire invited the participants to envision new horizons to reach a shared vision on a model masters degree program in nursing.

The advantages of utilizing a three round questionnaire for this study included: 1) the provision of a sense of anonymity to the participants; 2) economy, and 3) securing valuable input from a panel of experts located across the nation and Canada. The research design may have achieved greater objectivity and participation from the panel members by reducing scheduling conflicts and personality biases from affecting the results which is possible in the conference approach.

Modified Delphi Techniques

For this study the protocol of the traditional delphi technique was modified in the following way. Participants were not requested to generate a listing of education modules or components from scratch as would be standard in the delphi technique. Rather the basic delphi technique was modified by beginning the first round with a list of proposed education modules and components which came out of the literature review and was refined in a pilot study.

A review of the literature related to curriculum, health care reform, nursing education, and existing graduate nursing programs was conducted to identify potential education modules and components. Concepts identified as common curriculum organization themes (e.g. health promotion) that were included in program accreditation criteria or appeared repeatedly in the review of literature formulated the basis for the three round questionnaire.

As a result of the literature review the pilot study instrument proposed the utilization of 73 components and the following nine education modules for a model masters program: pharmacology, biostatistics, nutrition, health promotion and wellness, advanced role development, health education program planning, fiscal management, clinical practicum concepts, and clinical practicum settings.

To evaluate the relevance of the items listed to elicit responses from the panel, participants during the pilot study were instructed to rank the degree of importance of the proposed nine education modules and 73 components using a five-point Likert-type perception scale. Participants of the study pilot were also encouraged to record any qualitative comments under the "Recommendation Section" of the questionnaire booklet (See Appendix E).

Based on the qualitative information obtained during the pilot study the questionnaire for Round I was revised to include 42 components and the following ten education modules: pharmacology, clinical nutrition, health promotion, management of health problems,

community-based health education, nursing research, advanced role development, fiscal management, clinical practicum sites and clinical practicum skills.

The questionnaire booklet for Round I contained a brief cover letter and specific directions. The participants of the modified delphi were invited to rank the degree of importance of the 42 proposed education components (See Appendix I). Like the pilot study the first round questionnaire booklet utilized a five point Likert-type perception scale to assess the degree of importance of the proposed education components and a "Recommendation Section".

The questionnaire booklet for Round II was developed using the information obtained during the pilot study and Round I. The questionnaire booklet for Round II included a brief cover letter, specific directions, and role expectations for the nurse practitioner and client. Participants rank ordered the degree of importance of the 40 components and the following eight modules: pharmacology, clinical nutrition, health promotion and wellness, community-based health education, primary health care management, nursing research, advanced nursing practice, and clinical practicum (See Appendix K).

All education components contained in the second round questionnaire were identified as "of critical importance" by one or more experts during the first round. A Likert-type perception scale was utilized to secure quantitative data on the degree of importance of the proposed education modules and components.

The questionnaire for Round III utilized the eight education modules from Round II and 34 components. To collect both quantitative and qualitative data the questionnaire utilized a Likert-type perception scale and elicited the participant's concurrences or differences with the group consensus.

Pilot Study

The research instrument was field tested on a purposively selected sample of 32 professionals who had characteristics and experiences similar to the panel of experts for whom the questionnaire was designed. The pilot study included one physician assistant and 31 registered nurses from the education, hospital, community health, and office settings (See Appendix D).

Preliminary pretesting provided an opportunity to detect problems with the clarity of instructions and questionnaire, determine completion time, and evaluate the reliability and validity of the questionnaire (Waltz et al., 1984). The researcher requested the pilot group to respond to the questionnaire and provide suggestions about the terminology, sequence, and relevance of the education modules/components (Wandelt, 1970).

All participants ranked the degree of importance for each of the education modules and components in terms of a category rating scale. Quantitative values for the Likert-type scale ranged from one to five, with "of no importance" assigned a one and "of critical importance" assigned a five.

How Items Were Added or Deleted

Participants were likewise given an opportunity to change, delete, or add to the proposed education modules and components under the "Recommendation Section" of the questionnaire booklet. If three or more participants suggested the deletion or revision of an item the education module and/or component was deleted or revised. If one or more participants suggested adding an item the education module or component was included in the questionnaire. No education modules or components were deleted during the pilot study because the mean ratings for all the modules and components were at least 3.0.

Terms that could be easily misunderstood were clearly defined or qualified. Each objective statement dealt with a single idea and was worded distinctly. Education modules and components were sequenced from the simple to complex in order to assist in the organization of the panel's responses.

As the pilot study questionnaires were returned, recommendations from the panel were listed on a master sheet (See Appendix F). Comments from the pilot study confirmed that the questionnaire was neither too long or detailed and the format was easy to work with. However, the pilot study members did suggest the preliminary cover letter be shortened, include the auspices of the research, amount of time to complete the project, and demonstrate an academic affiliation.

Based upon the comments from the pilot study the preliminary cover letter for the pilot study and three round questionnarie was

shortened in length, revised to include the auspices of the research, amount of time required to participate in the project, and placed on KAW Area Technical School letterhead to demonstrate an academic affiliation (See Appendix B).

In addition, members of the pilot study did not support the idea of utilizing President Clinton's Health Care Task Force for the research project. Specifically members of the pilot group questioned the competency and interest of President Clinton's Health Care Task Force to identify a model masters program. As a result the decision was made to purposively select the panel of experts from the review of literature and registry mailing list of primary health care nurse practitioners.

The pilot study participants also suggested revisions, general recommendations, and additions to the questionnaire. Members of the pilot study recommended the following revisions to the proposed education modules: changing the major heading of biostatistics to nursing research; adding an education module for management of illness, and changing the clinical practicum concepts module to clinical practicum skills.

The general recommendations from the pilot study included: 1) placing more emphasis on the community setting, disease prevention, behavioral assessment, and treatment referral; 2) adding interdisciplinary teams and networking to the curriculum, and 3) changing the term "primary care" to "primary health care".

Proposed Pharmacology Components

A strong pharmacology base was identified by the pilot study as being important to the development of a model masters program. However, members of the pilot study recommended the pharmacology module be revised in the following manner: 1) identifying physiological and biochemical effects under one component entitled "Effects of drugs and foreign compounds on biological systems and 2) establishing a new component entitled "Pharmacologic management". The course content of the "Pharmacologic management" component included: basis of drug therapy; uses and disadvantages of drugs; behavioral aspects of taking and receiving drugs, and strategies with and without prescriptive authority.

Proposed Biostatistics Module

Members of the pilot study commented that: 1) research and statistical knowledge is a plus for the community-based primary health care nurse practitioner and 2) increased knowledge in nursing research is essential for managing programs. To afford the nurse practitioner the necessary research and statistical knowledge the panel renamed the "Biostatistics" module to "Nursing research" and expanded the components. The module was redesigned to include "Foundations", "Biostatistics", and "Major discipline questions".

As suggested by the pilot study the content of the "Foundations" component included 1) research dimensions, tools and design; 2) data collection; 3) statistical analysis and interpretation; 4) critique/ analysis of nursing theory and research, and 5) presenting the

research report. Whereas, the component entitled "Major discipline questions" addressed the nature and content of major questions in the discipline and major paradigm used to answer these questions.

Proposed Nutrition Module

In reference to the proposed nutrition module members of the pilot study commented that nutritional knowledge to promote health is helpful. However, members of the pilot study suggested consolidating the components from 14 to seven to enhance the proposed education module.

In follow up to the recommendations provided during the pilot study the "Clinical nutrition" component was deleted and the "Nutrition in disease" component was revised to include disease effects on nutrient metabolism, physiological basis of nutrition care, and biochemical basis of nutrition care. The components "Nutrition and food behavior" and "Community nutrition" were also expanded to include: physiological, environmental, cultural, and economic factors.

Proposed Health Promotion
and Wellness Module

Members of the pilot study suggested changing "Models of community-based promotive and preventive care" to "Models of community health promotion and preventive care". The pilot group also recommended the following changes: 1) making disease management an independent module and 2) adding components for health

assessment, health promotion programs, and community health goals strategies.

To ensure a unified understanding of the revised health promotion and wellness components the questionnaire was revised to include an overview of the suggested course content. As directed by the pilot study "Health assessment" presented concepts in biographic and demographic data, health risk appraisal, growth and development, health history, physical exam, and screening tests.

Whereas, the course content for the "Health promotion programs" included evaluation/screening, education/motivation, behavioral change (participatory), organizational enhancement, immunizations, and counseling.

In follow up to the general recommendation of the pilot study the component entitled "Community health goal strategies" was added to the model to afford the nurse practitioner experience in networking, collaboration, and team approaches to promote health.

Proposed Advanced Role Development

After reviewing the proposed advanced role development components members of the pilot study suggested adding the role of the nurse practitioner in the community as a professional citizen, networking, team approaches to community health goals, and debates on topics such as nurse practice acts.

Based upon the recommendations of the pilot study the proposed advanced role development module was revised in the following manner: 1) managed care component was transferred to the "Disease

management" module; 2) health care policy issues were renamed "Linkage between health and social issues", and 3) a conceptual framework component was added.

To ensure a unified understanding of the conceptual framework component an overview of suggested course concept was presented. As directed by the panel the term "Conceptual framework" was added as a broad education component that included: ethical decision making models, professional leadership, community role as a professional, interdisciplinary team and debates.

In addition, the "Computer technology" component was moved to the "Managed care" component and renamed informational computer networking. The component also included computer link ups with county and state projects, programs, and resources.

Proposed Management of Health Problems

Members of the pilot study suggested adding the management of health problems module to the model. The health management module was designed to enhance the nurse practitioner's expertise in the conceptual framework and aspects of managed care.

To ensure a unified understanding of the new module the questionnaire afforded the panel an overview of suggested course content. As directed by the pilot study the conceptual framework component afforded the nurse practitioner knowledge in the: incidence, etiology, risk factors, pathophysiology, clinical manifestations, and diagnostic assessment of illness.

In addition, aspects of managed care included: issues, team (interdisciplinary) approach, clinical decision making, treatment referrals, strategies, and evaluation of health outcomes.

Proposed Health Education Program Planning

The proposed health education program planning module was renamed and revised in follow up to the recommendations of the pilot study. Specifically, the members of the pilot study suggested that a model program should emphasize the community, adult learning techniques, and health promotion.

For this reason the module was renamed community-based health education and included the following components: principles of teaching and learning, risk management education, health belief model, economic, political and ethical issues, and program design. The "Program design" component was revised to include needs assessment, planning, implementation, and evaluation.

Proposed Fiscal Management Module

Members of the pilot study confirmed that financial management is a must for the community-based primary health care nurse practitioner. After reviewing the proposed module the pilot study recommended: adding documentation requirements and identifying options for financial support such as monies from community, county, state, federal or insurers.

Proposed Clinical Practicum Concepts

One of the pilot study members commented that clinical practicum concepts are achieved by the student when providing client care and can not be taught. In addition, the pilot study members suggested adding individual practitioner skills and working with communities as components for the module. Consequently, the module was renamed clinical practicum skills and include the components entitled: "Individual practitioner skills" and "Working with communities". Moreover, the individual practitioner skills should include health promotion and maintenance, disease prevention, early diagnosis of disease and disability, and health-illness client management.

Proposed Clinical Practicum Sites

After reviewing this module members of the pilot study commented that the settings identified in the instrument were viable and differ by student goals or by individual school mission. Additions to the module included the use of outpatient clinics of acute care hospitals and the inclusion of the community-based health centers.

Data Collection

All recommendations from the pilot group were incorporated into the first round questionnaire booklet and the final copy was formatted for mailing. Utilizing a series of three mailed questionnaires the following steps established the format and sequence of activities conducted in this modified delphi technique.

Step One

To secure a delphi panel that would consist of more than 20 members, a preliminary cover letter was sent to 79 purposively selected individuals explaining the purpose of the study and a modified delphi process. An enclosure with a self-addressed and stamped envelope was provided in the preliminary letter to ascertain the willingness of the recipient to participate in the proposed study (See Appendix H).

All recipients were instructed to complete the enclosure by placing a check mark on the appropriate line indicating: 1) a willingness to cooperate or 2) inability to participate in the study. The preliminary cover letter requested all enclosures to be completed and returned to the researcher within a two week period. Recipients not returning a completed enclosure were deleted from the mailing list. Those who agreed to serve in the modified delphi project constituted the sample of the total population.

Step Two

Upon receipt of the enclosure indicating a willingness to cooperate in the study, the first round booklet was immediately mailed to the participant. The first round booklet contained a cover letter thanking the participant for accepting the invitation to envision a model masters degree program. The cover letter also provided additional information on the three round questionnaire protocol, role of the nurse practitioner, and directions for the first round (See Appendix I).

The Round I questionnaire invited participants to rank the degree of importance of each education component by circling the appropriate number on a five point Likert-type perception scale from one ("of no importance) to five ("of critical importance"). To allow for greater depth of the panel response, the first round questionnaire also allowed the option to record any additions, deletions or comments under the "Recommendation Section" (See Appendix I).

Upon completion of the questionnaire participants were instructed to secure the booklet with tape or a staple prior to mailing. To expedite the mailing process the questionnaire booklet was self-addressed and stamped.

Step Three

To organize the data collection process a log was kept of the: 1) questionnaires mailed; 2) date of each mailing; 3) names and addressees of the recipients; 4) due date for return, and 5) date of reply. Additionally, if a reply was not received within four weeks after the mailing of each questionnaire a reminder letter was sent to the respondent (See Appendix P).

Step Four

As the first round questionnaires were returned, comments were listed on a master sheet (See Appendix J). A total of eight education modules and 42 education components were identified for a

model masters program in nursing based upon the information obtained from the Round I questionnaire.

Using the combined information from the pilot study and the first round, a questionnaire for Round II was developed and mailed to each member of the panel. Each education component in the Round II questionnaire was selected as being "of critical importance" by one or more experts during Round I. Since the education components in Round II had been identified as "of critical importance" the response "of no importance" on the Likert-type perception scale was revised to read "of minimal importance". Also to assist the participants to rank order the degree of importance of the education modules and components in a logical sequence the numerical scoring was reversed.

The booklet for round II contained a cover letter expressing the researcher's appreciation for the panel's participation and a written role expectation for the client and nurse practitioner. Participants were instructed to rank order the degree of importance of the proposed education modules from one (most critical) to eight (minimal). Rank order responses for the education components ranged one (most critical) to five (minimal) (See Appendix K).

Step Five

As the second round questionnaires were returned the education modules/components were listed on a master sheet (See Appendix K). The rank order and rank sum of the proposed education module and the average correlation among participants was calculated for each

education module/component. The Round III questionnaire was developed from the combined information received from the pilot study, Round I, and Round II of the modified delphi technique.

Round III participants received a letter expressing the researcher's appreciation for the panel's continued participation in the study and directions for the next step in the process. The final questionnaire invited the participants to rank order the proposed education modules and components after reviewing the group's consensus from Round II. Participants were also given the opportunity to document concurrences or differences from the group consensus in the questionnaire booklet.

The Round III questionnaire provided the panel a final chance to revise the group's consensus on the education modules and components necessary for a model masters degree program (MSN) to prepare professional nurses as community-based primary health care nurse practitioners (See Appendix M). Any dissent from the group's consensus was observed.

Upon the completion of the questionnaire participants were instructed to secure the booklet with tape or a staple prior to mailing. To expedite the mailing process the booklet was stamped and self-addressed.

Step Six

Following the completion of a three round modified delphi technique, results were sent to each panel member and pilot study participant along with a letter of gratitude for the individual's

participation in the study (See Appendix Q).

Statistical Analyses

A modified delphi technique develops its own process by seeking to develop a group consensus through a series of mailed questionnaires. Thus, the emphasis of the research methodology was the data collection process. The product derived from the utilization of a modified delphi technique was the identification of a model masters degree in nursing for the community-based primary health care nurse practitioner. Consequently, only a limited amount of statistical analyses was performed.

The research instrument used in this study elicited a group consensus and developed internal consistency reliability based upon data secured from a series of mailed questionnaires requesting input from a panel of experts. To better ensure the sensitivity of the questionnaire to identify a model masters degree program in nursing to prepare community-based primary care nurse practitioners, the researcher subdivided the response options. The importance of each of the proposed education modules and components were measured by a Likert-type perception scale.

Prior to conducting the statistical analyses for Round II and Round III all participants had rank ordered the proposed education modules and components by selecting a quantitative value. The numerical values were assigned in consistent order to represent the degree of importance of the education module and component. The numerical score also placed the panel members along a continuum with

respect to the degree of importance of the education module and component being measured (Polit & Hungler, 1985). Each participant was considered a separate case and was identified by the code number assigned to the form. The data was keyed into the computer by use of the SYSTAT file editor and data lists were proofread by the researcher. Appropriate statistical procedures were then performed.

Kendall's coefficient of concordance W, a nonparametric statistical test, was selected to determine true ranking of the proposed education modules and components, test the null hypothesis, and estimate the strength of agreement among participants.

To establish the Kendall's coefficient of concordance W, as a valid procedure to test the null hypothesis and determine the strength of agreement the research project was designed to meet the following nonparametric assumptions as outlined by Daniel (1978).

1. The data consist of m complete sets of observations or measurements on n objects or individuals.

2. The measurement scale is at least ordinal.

3. The observations as collected or recorded may consist of ranks. If the original data are not ranks, they must be capable of being converted to ranks.

The statistical program SYSTAT was used to tabulate responses from each questionnaire and analyze the data. Subcommand Kendall calculated the coefficient of concordance, W, mean rank for each education module and component, corresponding chi-square, and corrected for ties. The output produced by the subcommand Kendall

included the number of education modules and components, Kendall's W, the chi-square statistic, degrees of freedom, and the test of significance.

Moreover, the coefficient of concordance, W, was expressed as $W = \frac{\text{variance of rank sums}}{\text{maximum possible variance of rank sums}}$ or the ratio between the ranks sum of squares and the total sum of squares of a complete analysis of variance of the ranks. The coefficient of concordance, W, symbolized the average agreement, on a scale from .00 to 1.00, among the ranks with zero signifying no agreement and one complete agreement (Daniel, 1978; Kerlinger, 1986; SPSS 1990).

To test the null hypothesis of no association or no agreement between rankings against the alternative of agreement or positive dependency, the equation chi-square = m(n-1)(W) was utilized. The tabulated value of chi-square was then compared for significance with the values shown in the chi-square distribution table using n-1 degrees of freedom. To be statistically significant the chi-square obtained from the data must exceed the value shown in the table. Sufficiently large values of W, prompted the rejection of the null hypothesis of no association or no agreement between rankings.

As suggested by Bartz (1988) estimating the strength of the coefficient was described according to the following scheme:

Very high	= .80 or above
Strong	= .60 to .80
Moderate	= .40 to .60
Low	= .20 to .40
Very low	= .20 or less

Summary

This chapter has presented the sample, research design, instruments used in the study, and collection of data. Chapter III also introduced the education modules and components contained within each questionnaire and the method of statistical analysis. Quantitative data dominated each questionnaire, but the qualitative data collected during the pilot study and modified delphi technique added to the breathe of each instrument. The summary of the research findings from the three round modified delphi technique will be presented in Chapter IV.

CHAPTER IV

PRESENTATION OF FINDINGS

In this chapter the results of the modified delphi study conducted among a panel of purposively selected health care professionals across the nation and Canada are presented. Participants of the panel were requested to establish a group consensus on a model masters degree in nursing through a series of three questionnaires. The chapter is divided into four sections, presented in the following order: 1) Response Rate, 2) Round I, 3) Round II, and 4) Round III.

Response Rate

To secure a delphi panel that would consist of more than 20 members a preliminary cover letter was mailed to 79 purposively selected health care professionals across the United States and Canada explaining the purpose of the study and research methodology. In addition, the cover letter invited the recipient to complete an enclosure by checking either yes to indicate a willingness to cooperate or no to denote an inability to participate in the project. Completed enclosures were returned in the provided self-addressed and stamped envelope (See Appendix H).

Of the 79 health care professionals 48 agreed to participate without reservation, one agreed to participate but commented that a masters program should not be designed utilizing a three round

questionnaire, 14 did not respond to the cover letter, one was returned due to lack of a forwarding address, and 15 indicated an inability to participate in the project. Eight of the fifteen respondents that indicated an inability to participate in the project but did not provide an explanation. Seven of the 15 respondents that declined the invitation to envision a model masters program provided the following comments. One was to be out of the country, three did not have the time to devote to this project, and three felt the project was too far afield from the respondent's expertise.

The 48 respondents who agreed to participate in the project without reservation received the first round questionnaire. Participants during the first round were invited to indicate the degree of importance using a five point Likert-type perception scale for each of the 42 proposed education modules. Of the 48 purposively selected health care professionals, 39 returned the first booklet. Consequently, the response rate for the first round was 81 percent.

Each education module and component in the Round II questionnaire was selected as being "of critical importance" by one or more experts during Round I. Based upon the recommendations of the participants the questionnaire for Round II contained eight education modules and 40 components.

Participants were invited to rank order the degree of importance of the proposed education modules and components using a Likert-type perception scale based upon the specified role expectations for the

nurse practitioner and client. Of the 39 participants who returned the first round questionnaire, 38 returned the second round booklet. The 38 responses out of a possible 48 yielded a 79 percent return rate.

The input from the participants during Round II prompted the revision of the third and final questionnaire. In Round III the rank-ordered listing of the eight proposed education modules and 34 components were returned to the participants. The final questionnaire requested the participants to indicate concurrence or disagreement with the group consensus. Thirty-four out of the 38 participants from Round II returned the final questionnaire. The 34 responses out of a possible 48 yielded a 71 percent return rate. Of the 48 comprising the sample for this study, 34 completed the entire project, a 71 percent response rate (Table 1) (See Appendix O).

Round I

The first round questionnaire invited the panel members to indicate the degree of importance of the 42 proposed education components using a five point Likert-type perception scale with one being "of no importance" and five "of critical importance". Participants were also encouraged to record any additions or comments to the module under the "Recommendation Section" of the questionnaire booklet (See Appendix I).

As the completed questionnaire booklets were received comments and recommendations were listed on a master sheet under the

TABLE 1

PARTICIPATION RATE

	Participation %
48 confirmed participants	
39 participants - Round I	81%
38 participants - Round II	79%
34 participants - Round III	71%
34 of 48 participants completed project	71%

appropriate education module (See Appendix J). The analysis of data from the first round questionnaires included descriptive statistics of means, frequencies, and percentages of responses.

Proposed Pharmacology Module

Pharmacology the first education module proposed the use of four components to prepare professional nurses as primary health care providers. The proposed pharmacology module was developed to provide nurse practitioners a background in the "Effects of drugs and foreign compounds on biological systems" including physiological and biochemical effects, "Mechanisms responsible for therapeutic and toxic effects", "Immunopharmacology", and "Pharmacologic management". The "Pharmacologic management" component included the basis of drug therapy, uses and disadvantages of drugs, behavioral aspects of taking and receiving drugs, and strategies with/without prescriptive authority.

Table 2 summarizes the panel's opinion on the degree of importance of the proposed pharmacology module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses "Effects of drugs and foreign compounds on biological systems", "Mechanisms responsible for therapeutic and toxic effects", and "Pharmacologic management" were identified as being "of critical importance".

The "Effects of drugs and foreign compounds on biological systems" was selected to be "of critical importance" to the community-based primary health care nurse practitioner by 24 (61.54

TABLE 2

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED PHARMACOLOGY COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Effects of Drugs & Foreign Compounds on Biological Systems	4.41	No	-	-
		Little	1	2.56
		Some	6	15.39
		Much	8	20.51
		Critical	24	61.54
			N = 39	
Mechanisms Responsible for for Therapeutic & Toxic Effects	4.23	No	-	-
		Little	1	2.56
		Some	8	20.51
		Much	11	28.21
		Critical	19	48.72
			N = 39	
Immunopharmacology	3.97	No	-	-
		Little	4	10.26
		Some	6	15.39
		Much	16	41.03
		Critical	13	33.33
			N = 39	
Pharmacologic Management	4.82	No	-	-
		Little	-	-
		Some	2	5.13
		Much	3	7.69
		Critical	34	87.18
			N = 39	

percent) of the 39 participants. In descending order eight (20.51 percent), six (15.39 percent), and one (2.56 percent) of the 39 respondents indicated the degree of importance to be "much", "some", and "little", respectively. The arithmetic average of the sum of the responses divided by the 39 participants was 4.41.

"Mechanisms responsible for therapeutic and toxic effects" were identified to be "of critical importance" to the community-based primary health care nurse practitioner by 19 (48.72 percent) of the 39 respondents. In descending order 11 (28.21 percent), eight (20.51 percent), and one (2.56 percent) of the 39 respondents indicated the degree of importance to be "much", "some", and "little", respectively. Based upon the 39 responses the arithmetic mean for the second component was 4.23.

"Pharmacologic management" was considered to be "of critical importance" to the community-based primary health care nurse practitioner by 34 (87.18 percent) of the 39 respondents. In descending order 3 (7.90 percent) and 2 (5.26 percent) of the 39 respondents indicated the degree of importance to be "much" and "some", respectively. The arithmetic mean was calculated at 4.82 based upon the 39 responses.

In contrast based upon the frequencies of the panel's rank order responses "Immunopharmacology" was evaluated to be "of much importance" to the community-based primary health care nurse practitioner by 16 (41.03 percent) of the 39 respondents. In descending order 13 (33.33 percent), 6 (15.39 percent), and 4 (10.26 percent) of the 39 respondents indicated the degree of importance to

be "critical", "some", "little", respectively. Based upon the 39 responses the arithmetic mean was 3.97.

Proposed Clinical Nutrition Module

Clinical nutrition the second education module proposed the use of seven didactic components. The proposed clinical nutrition module introduced the following components: "Nutrition in disease" including disease effects on nutrient metabolism, physiological basis of nutrition care, and biochemical basis of nutrition care; "Assessment"; "Counseling"; "Diet therapy", and "Nutrition and exercise". The components of "Nutrition and food behavior" and "Community nutrition" mutually included physiological, environmental, cultural, and economic concepts.

Table 3 summarizes the panel's opinion on the degree of importance of the proposed clinical nutrition module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses all proposed education components were identified as being "of much importance". Specifically, the clinical nutrition components were rank-ordered in the following manner.

"Nutrition in disease" was selected to be "of much importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 11 (28.21 percent), six (15.39 percent), and one (2.56 percent) of the 39 respondents indicated the degree of importance to be "critical",

TABLE 3

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED CLINICAL NUTRITION COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Nutrition in Disease	4.08	No	-	-
		Little	1	2.56
		Some	6	15.39
		Much	21	53.85
		Critical	11	28.21
		N = 39		
Assessment	4.39	No	-	-
		Little	-	-
		Some	2	5.13
		Much	20	51.28
		Critical	17	43.59
		N = 39		
Counseling	4.21	No	-	-
		Little	-	-
		Some	5	12.82
		Much	21	53.85
		Critical	13	33.33
		N = 39		
Diet Therapy	3.77	No	-	-
		Little	2	5.13
		Some	12	30.77
		Much	18	46.15
		Critical	7	17.95
		N = 39		
Nutrition and Food Behavior	4.03	No	-	-
		Little	-	-
		Some	9	23.08
		Much	20	51.28
		Critical	10	25.64
		N = 39		

TABLE 3 (Continued)

Proposed Components	Mean	Degree of Importance	f	%
Nutrition and Exercise	4.23	No	-	-
		Little	-	-
		Some	5	12.82
		Much	20	51.28
		Critical	14	35.90
		N = 39		
Community Nutrition	3.95	No	-	-
		Little	2	5.13
		Some	8	20.51
		Much	19	48.72
		Critical	10	25.64
		N = 39		

"some", "little", respectively. The arithmetic average of the sum of the responses divided by the 39 participants was 4.08.

The "Assessment" component was evaluated to be "of much importance" to the community-based primary health care nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order 17 (43.59 percent) and 2 (5.13 percent) of the 39 respondents indicated the degree of importance to be "critical" and "some", respectively. Based upon the panel's 39 responses the arithmetic mean was 4.39.

"Counseling" was similarly identified to be "of much importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 13 (33.33 percent) and 5 (12.82 percent) of the 39 respondents indicated the degree of importance to be "critical" and "some", respectively. The arithmetic mean for the counseling component was 4.21 based upon the 39 responses.

"Diet therapy" was considered to be "of much importance" to the community-based primary health care nurse practitioner by 18 (46.15 percent) of the 39 respondents. In descending order 12 (30.77 percent), seven (17.95 percent) and two (5.13 percent) of the 39 respondents indicated the degree of importance to be "some", "critical", and "little", respectively. The arithmetic mean for "Diet therapy" was 3.77 based upon the 39 responses.

"Nutrition and food behavior" was selected to be "of much importance" to the community-based primary health care nurse practitioner by 20 (51.28 percent) of the 39 respondents. In

descending order 10 (25.64 percent) and nine (23.08 percent) of the 39 respondents identified the degree of importance to be "critical" and "some", respectively. Based on the 39 responses the arithmetic mean for "Nutrition and food behavior" was 4.00.

"Nutrition and exercise" was identified to be "of much importance" to the community-based nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order 14 (35.90 percent) and five (12.82 percent) of the 39 respondents indicated the degree of importance to be "critical" and "some", respectively. The mean for "Nutrition and exercise" was 4.23 based upon the 39 responses.

The final component "Community nutrition" was considered to be "of much importance" to the community-based primary health care nurse practitioner by 19 (48.72 percent) of the 39 respondents. In descending order 10 (25.64 percent), eight (20.51 percent), and two (5.13 percent) of the 39 respondents indicated the degree of importance to be "critical", "some", and "little", respectively. The arithmetic mean for "Community nutrition" was 3.95 based upon the 39 responses.

Proposed Health Promotion and Wellness Module

Health promotion and wellness module proposed the use of ten components. Specifically the module identified "Common public health problems", "Epidemiology", "Holistic health maintenance", "Health assessment", "Health promotion programs", "Community health

goal strategies", "Behavioral theories and concepts", "Biobehavioral mechanism of health", "Family systems theory", and "Models of community-based health promotion and preventive care".

To assist the panel in determining the degree of importance for each proposed component the questionnaire provided additional informational data on "Holistic health maintenance", "Health assessment", "Health promotion programs", and "Community health goal strategies components.

The concept of holistic health maintenance was based upon the physical, emotional, social, economic, and spiritual needs of the client and the delivery of health promotion services to prevent illness and maintain maximal function. Thus, the component "Holistic health maintenance was defined as measures to prevent illness, maintain maximal function, and promote physical, mental, and social well-being.

Assessment of the client's health status encompassed the "Health assessment" component. Essential baseline data necessary to assess the client's health status included: biographic and demographic data, health risk appraisal, growth and development concepts, health history and physical exam, and screening tests.

The decision to establish a health promotion program must be based on the assessed health needs of the client. For this reason the component "Health promotion programs" included client evaluation, screening, education, motivation, behavior change (participatory), organizational enhancement, immunizations, and counseling.

The action plan to raise the client's level of health was outlined in the component entitled "Community health goal strategies". Specific strategies to promote the client's health included networking, collaboration, and team (interdisciplinary) approaches.

Table 4 summarizes the panel's opinion on the degree of importance of the proposed health promotion and wellness module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses the components of "Holistic health maintenance", "Health assessment", and "Health promotion programs" were selected as being "of critical importance".

"Holistic health maintenance" was evaluated to be "of critical importance" to the community-based primary health care nurse practitioner by 23 (58.97 percent) of the 39 respondents. In descending order 14 (35.90 percent) and 2 (5.13 percent) of the 39 respondents determined the degree of importance as "much" and "some", respectively. The arithmetic mean was 4.54 based upon the 39 responses.

The components "Health assessment" and "Health promotion programs" were also selected to be "of critical importance" to the community-base primary health care nurse practitioner by 27 (69.23 percent) of the 39 respondents. In like manner, the remaining 12 (30.77 percent) respondents indicated both components were "of much importance" to a model masters program. The arithmetic mean for "Health assessment" and "Health promotion programs" was 4.69 based upon the 39 responses.

TABLE 4

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED HEALTH PROMOTION AND WELLNESS COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Common Public Health Problems	4.28	No	-	-
		Little	-	-
		Some	5	12.82
		Much	18	46.15
		Critical	16	41.03
			N = 39	
Epidemiology	4.00	No	-	-
		Little	1	2.56
		Some	6	15.39
		Much	24	61.54
		Critical	8	20.51
			N = 39	
Holistic Health Maintenance	4.54	No	-	-
		Little	-	-
		Some	2	5.13
		Much	14	35.90
		Critical	23	58.97
			N = 38	
Health Assessment	4.69	No	-	-
		Little	-	-
		Some	-	-
		Much	12	30.77
		Critical	27	69.23
			N = 39	
Health Promotion Programs	4.69	No	-	-
		Little	-	-
		Some	-	-
		Much	12	30.77
		Critical	27	69.23
			N = 39	

TABLE 4 (Continued)

Proposed Components	Mean	Degree of Importance	f	%
Community Goal Health Strategies	4.36	No	-	-
		Little	-	
		Some	4	10.26
		Much	17	43.59
		Critical	18	46.15
			N = 39	
Behavioral Theories & Concepts	3.97	No	-	-
		Little	-	-
		Some	10	25.64
		Much	20	51.28
		Critical	9	23.08
			N = 39	
Biobehavioral Health Mechanisms	3.97	No	-	-
		Little	-	-
		Some	11	28.21
		Much	18	46.15
		Critical	10	25.64
			N = 39	
Family Systems Theory	4.05	No	-	-
		Little	-	-
		Some	8	20.51
		Much	21	53.85
		Critical	10	25.64
			N = 38	
Health Promotion & Preventive Care Community-Based Models	4.05	No	-	-
		Little	-	-
		Some	7	17.95
		Much	23	58.97
		Critical	9	23.08
			N = 39	

"Community health goal strategies" were identified to be "of critical importance" to the community-based primary health care nurse practitioner by 18 (46.15 percent) of the 39 respondents. In descending order 17 (43.59 percent) and four (10.26 percent) of the 39 participates indicated the degree of importance was "much" and "some", respectively. The mean for the "Community health strategies" component was 4.36 based upon the 39 responses.

By comparison the frequencies of the panel's rank order responses suggested the following components were "of much importance" "Common public health problems", "Community health goal strategies", "Behavioral theories and concepts", "Biobehavioral mechanisms of health", "Family systems theory", and "Models of Community-based health promotion and preventive care".

Moreover, "Common public health problems" were identified to be "of much importance" to the community-based primary health care nurse practitioner by 18 (46.15 percent) of the 39 respondents. In descending order 16 (41.03 percent) and five (12.82 percent) of the 39 respondents indicated the degree of importance as "critical" and "some", respectively. The arithmetic average of the sum of the responses divided by the 39 participates was 4.28.

"Epidemiology" was considered to be "of much importance" to the community-based primary health care nurse practitioner by 24 (61.54 percent) of the 39 respondents. In descending order eight (20.51 percent) and six (15.39 percent) of the 39 respondents indicated the degree of importance as "critical" and "some", respectively. The

mean for the "Epidemiology" component was 4.00 based upon the 39 responses.

"Behavioral theories and concepts" were considered to be "of much importance" to community-based primary health care nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order 10 (25.64 percent) and nine (23.08 percent) of the 39 respondents determined the degree of importance to be "some" and "critical", respectively. The arithmetic mean was 3.97 based upon the 39 responses.

"Biobehavioral mechanisms of health" were evaluated to be "of much importance" to the community-based primary health care nurse practitioner by 18 (46.15 percent) of the 39 respondents. In descending order 11 (28.21 percent) and 10 (25.64 percent) of the 39 respondents indicated the degree of importance to be "some" and "critical", respectively. The arithmetic mean based upon the panel's 39 responses was 3.97.

"Family systems theory" was selected to be "of much importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 10 (25.64 percent) and eight (20.51 percent) of the 39 respondents determined the degree of importance to be "critical" and "some", respectively. Based upon the 39 panel responses the arithmetic mean was 4.05.

In like manner, the final component "Models of community-based health promotion and preventive care" was identified to be "of much importance" to the community-based primary health care nurse

practitioner by 23 (58.97 percent) of the 39 respondents. In descending order nine (23.08 percent) and seven (17.95 percent) of the 39 respondents considered the degree of importance to be "critical" and "some", respectively. The arithmetic mean was 4.051 based upon the 39 panel responses.

Proposed Management of Health Problems Module

"Management of health problems" the fourth education module of the model affords nurse practitioners a conceptual framework and managed care component. As outlined by the questionnaire the "Conceptual framework" provided the nurse practitioner information on incidence, etiology, risk factors, pathophysiology, clinical manifestations, and diagnostic assessment of illness.

The second component "Managed care" afforded the nurse practitioner an understanding of managed care issues, team (interdisciplinary) approach, informational computer networking, clinical decision making, treatment referrals, strategies, and evaluation of health outcomes.

Table 5 summarizes the panel's opinion of the degree of importance for the proposed management of health problems module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses "Conceptual framework" was considered to be "of critical importance" to the community-based primary health care nurse practitioner by 19 (48.72 percent) of the 39 respondents. In descending order 16 (41.03

TABLE 5

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED MANAGEMENT OF HEALTH PROBLEMS COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Conceptual Framework	4.39	No	-	-
		Little	-	-
		Some	4	10.26
		Much	16	41.03
		Critical	19	48.72
		N = 39		
Managed Care	4.13	No	-	-
		Little	-	-
		Some	5	12.82
		Much	24	61.54
		Critical	10	25.64
		N = 39		

percent) and 4 (10.26 percent) of the 39 respondents determined the degree of importance to be "much" and "some", respectively. The arithmetic average of the sum of the responses divided by the 39 participants was 4.39.

In contrast the frequencies of the panel's responses identified "Managed care" as being "of much importance" to the community-based primary health care nurse practitioner by 24 (61.54 percent) of the 39 respondents. In descending order 10 (25.64 percent) and five (12.82 percent) of the 39 respondents indicated the degree of importance to be "critical" and "some", respectively. The arithmetic mean was 4.13 based upon the panel's 39 responses.

Proposed Community-Based Health Education Module

The proposed five components of the community-based health education module were designed to include the concepts and issues impacting the process of community-based information sharing. Specifically, the module included "Principles of teaching and learning", "Risk management education", "Health belief model", "Economic, political, and ethical issues", and "Program design".

To clarify the content of the proposed module the questionnaire included the concepts of individual perceptions, modifying factors, and likelihood of action under the "Health belief model. In like manner, the concepts of "Program design" were identified as needs assessment, planning: expected outcomes, implementation, and evaluation.

Table 6 summarizes the panel's opinion of the degree of importance of proposed community-based health education module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses "Program design" was suggested to be "of critical importance" to the community-based primary health care nurse practitioner by 16 (41.03 percent) of the 39 respondents. In descending order 12 (30.77 percent) and 11 (28.21 percent) of the 39 respondents determined the degree of importance to be "some" and "much", respectively. The arithmetic mean for the 39 responses was 4.10.

By comparison using the frequencies of the panel's rank order responses "Principles of teaching and learning", "Risk management education", and "Economic, political, and ethical issues" were identified as being "of much importance".

"Principles of teaching and learning" were considered to be "of much importance" to the community-based primary health care nurse practitioner by 15 (38.46 percent) of the 39 respondents. In descending order 13 (33.33 percent) 10 (25.64 percent), and one (2.56 percent) of the 39 respondents indicated the degree of importance to be "critical", "some", and "little", respectively. The arithmetic average of the sum of responses divided by the 39 participants was 4.03.

"Risk management education" was identified to be "of much importance" to the community-based primary health care nurse practitioner by 16 (41.03 percent) of the 39 respondents. In descending order 12 (30.77 percent), 10 (25.64 percent), and

TABLE 6

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED COMMUNITY-BASED HEALTH EDUCATION COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Teaching & Learning Principles	4.03	No	-	-
		Little	1	2.56
		Some	10	25.64
		Much	15	38.46
		Critical	13	33.33
			N = 39	
Risk Management Education	3.90	No	-	-
		Little	1	2.56
		Some	12	30.77
		Much	16	41.03
		Critical	10	25.64
			N = 39	
Health Belief Model	3.72	No	-	-
		Little	2	5.13
		Some	17	43.59
		Much	10	25.64
		Critical	10	25.64
			N = 39	
Issues (economic, political & ethical)	3.97	No	-	-
		Little	-	-
		Some	13	33.33
		Much	14	35.90
		Critical	12	30.77
			N = 39	
Program Design	4.10	No	-	-
		Little	-	-
		Some	12	30.77
		Much	11	28.21
		Critical	16	41.03
			N = 39	

one (2.56 percent) of the 39 respondents determined the degree Of importance to be "some", "critical", and "little", respectively. Based upon the 39 responses the arithmetic mean was 3.90.

"Economic, political, and ethical issues" were evaluated to be "of much importance" to the community-based primary health care nurse practitioner by 14 (35.90 percent) of the 39 respondents. In descending order 13 (33.33 percent) and 12 (30.77 percent) indicated the degree of importance to be "some" and "critical", respectively. The arithmetic mean was 3.97 based upon the 39 responses.

Proposed Nursing Research Module

The nursing research module affords nurse practitioners components in the areas of research foundations, biostatistics, and major discipline questions. Specifically the "Foundations" component included concepts in the areas of research dimensions, tools, and design; data collection; statistical analysis and interpretation; critique/analysis of nursing theory and research, and presenting the research report. To clarify the content of the "Major discipline questions" component the questionnaire identified the nature, content, and noteworthy paradigm solutions as concepts.

Table 7 summarizes the panel's opinion of the degree of importance for the proposed nursing research module to the development of a model masters degree program. Using the frequencies of the panel's rank order responses "Foundations", were considered to be "of critical importance" to the community-based primary health care nurse practitioner by 15 (38.46 percent)

TABLE 7

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED NURSING RESEARCH COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Foundations	4.07	No	-	-
		Little	1	2.56
		Some	10	25.64
		Much	13	33.33
		Critical	15	38.46
		N = 39		
Biostatistics	3.46	No	-	-
		Little	2	5.13
		Some	21	53.85
		Much	12	30.77
		Critical	4	10.26
		N = 39		
Major Discipline Questions	3.72	No	1	2.56
		Little	1	2.56
		Some	15	38.46
		Much	13	33.33
		Critical	9	23.08
		N = 39		

of the 39 respondents. In descending order 13 (33.33 percent), 10 (25.64 percent), and one (2.56 percent) of the 39 respondents determined the degree of importance to be "much", "some", and "little", respectively. Based upon the 39 responses the arithmetic mean was calculated to be 4.07.

In contrast the frequencies of the panel's responses suggested that "Biostatistics" and "Major discipline questions" were "of some importance". "Biostatistics" was selected to be "of some importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 12 (30.77 percent), four (10.26 percent), and two (5.13 percent) of the 39 established the degree of importance to be "much", "critical", and "little", respectively. The arithmetic mean was 3.46 based upon the 39 responses.

"Major discipline questions" were identified as "of some importance" to the community-based primary health care nurse practitioner by 15 (38.46 percent) of the 39 respondents. In descending order 13 (33.33 percent), nine (23.08 percent), one (2.56 percent), and one (2.56 percent) of the 39 respondents concluded the degree of importance to be "much", "critical", "little", and "no", respectively. Based upon the panel's 39 responses the arithmetic mean was 3.72.

Proposed Advanced Role

Development Module

The "Advanced role development" module was developed to afford nurse practitioners a conceptual framework, linkage between health and social issues, and models of planned change. To clarify the concepts of the "Conceptual framework" the questionnaire identified ethical decision making models, professional leadership, and community role as a professional citizen, interdisciplinary team, and debates.

Table 8 summarizes the panel's opinion of the degree of importance for the proposed advanced role development module to the development of a model masters degree program. Based upon the frequencies of the panel's rank order responses "Conceptual framework", "Linkage between health and social issues", and "Models of planned change were suggested to be "of much importance".

"Conceptual framework" was considered to be "of much importance" to the community-based primary health care nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order 17 (43.59 percent) one (2.56 percent), and one (2.56 percent) of the 39 respondents determined the degree of importance to be "critical", "some", and "little", respectively. Based upon the panel's 39 responses the arithmetic mean was 4.36.

"Linkage between Health and social issues" was selected to be "of much importance" to the community-based primary health care nurse practitioner by 17 (43.59 percent) of the 39 respondents.

TABLE 8

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED ADVANCED ROLE DEVELOPMENT COMPONENTS IN ROUND I OF STUDY

Proposed Module	Mean	Degree of Importance	f	%
Conceptual Framework	4.36	No	-	-
		Little	1	2.56
		Some	1	2.56
		Much	20	51.28
		Critical	17	43.59
			N = 39	
Linkage between Health and Social Issues	4.15	No	-	-
		Little	-	-
		Some	8	20.51
		Much	17	43.59
		Critical	14	35.90
			N = 39	
Models of Planned Change	3.80	No	-	-
		Little	1	2.56
		Some	12	30.77
		Much	20	51.28
		Critical	6	15.39
			N = 39	

In descending order 14 (35.90 percent) and eight (20.51 percent) of the 39 respondents identified the degree of importance to be "critical" and "some", respectively. The arithmetic mean was 4.15 based upon the panel's 39 responses.

"Models of planned change" were considered to be "of much importance" to the community-based health care nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order 12 (30.77 percent), six (15.39 percent), and one (2.56 percent) of the 39 respondents determined the degree of importance to be "some", "critical", and "little", respectively. Based upon the 39 responses the arithmetic mean was 3.80.

Proposed Fiscal Management Module

The fiscal management module afforded nurse practitioners educational components in "Cost accounting, benefit, and effectiveness", "Budgeting", "Ethical and legal issues", and "Finance alternatives". Table 9 summarizes the panel's opinion on the degree of importance for the proposed fiscal management component in a model masters program.

Based upon the frequencies of the panel's rank order responses "Ethical and legal issues" were evaluated to be "of much importance" to the community-based primary health care nurse practitioner by 18 (46.15 percent) of the 39 respondents. In descending order 14 (35.90 percent), five (12.82 percent), and two (5.13 percent) of the 39 respondents determined the degree of importance to be "critical",

TABLE 9

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED FISCAL MANAGEMENT COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Cost Accounting, Benefit, and Effectiveness	3.49	No	-	-
		Little	2	5.13
		Some	19	48.72
		Much	15	38.46
		Critical	3	7.69
			N = 39	
Budgeting	3.56	No	-	-
		Little	-	-
		Some	22	56.41
		Much	12	30.77
		Critical	5	12.82
			N = 39	
Ethical and Legal Issues	4.13	No	-	-
		Little	2	5.13
		Some	5	12.82
		Much	18	46.15
		Critical	14	35.90
			N = 39	
Finance Alternatives	3.59	No	-	-
		Little	2	5.13
		Some	20	51.28
		Much	9	23.08
		Critical	8	20.51
			N = 39	

"some", and "little", respectively. The arithmetic mean for the 39 responses was 4.13.

By contrast the frequencies of the panel's rank order responses suggested that the remaining three components were "of some importance". Specifically "Cost accounting, benefit, and effectiveness" was selected to be "of some importance" to the community-base primary health care nurse practitioner by 19 (48.72 percent) of the 39 respondents. In descending order 15 (38.46 percent), three (7.69 percent), and two (5.13 percent) of the 39 respondents determined the degree of importance to be "much", "critical", and "little", respectively. Based upon the 39 responses the arithmetic mean was 3.49.

"Budgeting" was considered to be "of some importance" to the community-based primary health care nurse practitioner by 22 (56.41 percent) of the 39 respondents. In descending order 12 (30.77 percent) and five (12.82 percent) of the 39 respondents identified the degree of importance to be "much" and "critical", respectively. The arithmetic mean for the 39 responses was 3.56.

"Finance alternatives" were identified to be "of some importance" to the community-based nurse practitioner by 20 (51.28 percent) of the 39 respondents. In descending order nine (23.08 percent), eight (20.51 percent), and two (5.13 percent of the 39 respondents established the degree of importance to be "much", "critical", and "little", respectively. Based upon the 39 responses the arithmetic mean was 3.59.

Proposed Clinical Practicum Sites Module

The clinical practicum module proposed the utilization of community-based health centers and primary health care providers to reinforce the curriculum concepts. To ensure a uniform understanding of the module the questionnaire booklet suggested the use of school, work place (industry and business), rural community, and economically depressed areas as community-based health centers. In like manner, the questionnaire recommended the utilization of ambulatory care centers, physician's offices, and emergency department as primary health care providers.

Table 10 summarizes the panel's opinion of the degree of importance for the proposed clinical practicum sites module in the development of a model masters program. Based upon the frequencies of the panel's rank order responses "Community-based health centers" and "Primary health care providers" were identified as being "of critical importance".

"Community-based health centers" were considered to be "of critical importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 14 (35.90 percent) and four (10.26 percent) of the 39 respondents determined the degree of importance to be "much" and "some", respectively. The arithmetic average of the sum of the responses divided by the 39 participants was 4.44.

"Primary health care providers" were selected to be "of critical importance" to the community-based primary health care nurse practitioner by 17 (43.59 percent) of the 39 respondents. In

TABLE 10

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED CLINICAL PRACTICUM SITES COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Community-Based Health Centers	4.44	No	-	-
		Little	-	-
		Some	4	10.26
		Much	14	35.90
		Critical	21	53.85
			N = 39	
Primary Health Care Providers	4.23	No	-	-
		Little	-	-
		Some	8	20.51
		Much	14	35.90
		Critical	17	43.59
			N = 39	

descending order 14 (35.90 percent) and eight (20.51 percent) of the 39 respondents identified the degree of importance to be "much" and "some", respectively. Based upon the 39 responses the arithmetic mean was 4.23.

Proposed Clinical Practicum Skills Module

The clinical practicum skills module proposed the utilization of "Individual practitioner skills" and "Working with communities" as components. To better ensure a uniform understanding of the module the questionnaire booklet identified the concepts of health promotion and maintenance, disease prevention, early diagnosis of disease/disability, and health-illness client management as suggested individual practitioner skills.

Table 11 summarizes the panel's opinion of the degree of importance for the clinical practicum skills module in the development of a models masters program. Based upon the frequencies of the panel's rank order responses "Individual practitioner skills" and "Working with communities" were identified as being "of critical importance".

The "Individual practitioner skills" were selected as "of critical importance" and "of much importance" by 29 (74.36 percent) and 10 (25.64 percent) of the 39 respondents, respectively. The arithmetic average of the sum of responses divided by the 39 participants was 4.74.

TABLE 11

MEANS, IMPORTANCE, FREQUENCIES, AND PERCENTAGES OF THE PROPOSED CLINICAL PRACTICUM SKILLS COMPONENTS IN ROUND I OF STUDY

Proposed Components	Mean	Degree of Importance	f	%
Individual Practitioner Skills	4.74	No	-	-
		Little	-	-
		Some	-	-
		Much	10	25.64
		Critical	29	74.36
			N = 39	
Working With Communities	4.36	No	-	-
		Little	1	2.56
		Some	5	12.82
		Much	12	30.77
		Critical	21	53.85
			N = 39	

The component "Working with communities" was identified as "of critical importance" to the community-based primary health care nurse practitioner by 21 (53.85 percent) of the 39 respondents. In descending order 12 (30.77 percent), five (12.82 percent), and one (2.56 percent) of the 39 respondents considered the degree of importance to be "much", "some", and "little", respectively. The arithmetic mean for the 39 responses was 4.36.

Round II

The questionnaire for Round II was revised to contain eight education modules and 40 components as recommended by the participants during Round I. In addition, the proposed education modules and components in Round II were selected as being "of critical importance" by one or more experts during Round I.

The second questionnaire invited the participants to rank order the importance of the proposed education modules from one (most critical) to eight (minimal) based upon a specific role expectation. The participants were also invited to rank order the importance of the proposed education components for each module from one (most critical) to five (minimal) (See Appendix K).

As the questionnaire booklets were received comments and recommendations were listed on a master sheet under the appropriate education module (See Appendix L). Analysis of data from the returned questionnaires for the second round included the rank order, rank sum, average correlation between participants using Kendall's Coefficient of Concordance W, and chi-square distribution.

Proposed Education Modules

Based upon the curriculum content of the proposed model program the panel recommended revising the title of the "Advanced role development" module to "Advanced nursing leadership." As directed by the panel the questionnaire for Round II was revised to reflect the suggested title change.

The rank order and rank sum of the eight proposed education modules was derived from the quantitative data afforded by the Likert-type perception scale. As each questionnaire was returned the participant's rank order responses were entered into the statistical program SYSTAT to tabulate and analyze the data.

Based upon the analysis of the panel responses the rank sums of the proposed education modules were identified in the following ascending order: 98.0 "Health promotion and wellness"; 122.0 "Primary health care management"; 133.5 "Clinical practicum; 166.0 "Pharmacology"; 175.0 "Advanced nursing practice"; 180.0 "Community-based health education"; 238.0 "Clinical nutrition", and 255.5 "Nursing research".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.344 suggesting a low agreement on the degree of importance of the proposed education modules among the participants. To statistically evaluate the significance of W a chi-square analysis was conducted. Using the result W = 0.344 the calculated value of chi-square was 38(7)(0.344) or 91.50.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Utilizing the chi-square distribution table and 7 degrees of freedom a chi-square of 24.32 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 24.32 or larger happen by chance less than 0.1% of the time, the observed chi-square of 91.50 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 12 summarizes the rank sum of the proposed education modules, the average correlation between participants during Round II, and chi-square analysis.

Proposed Pharmacology Module

As a result of the recommendations and comments received from the panel during Round I the proposed pharmacology module was modified for the second round questionnaire. The panel suggested the pharmacology module should include solid courses in pharmacology, principles of basic mechanisms, specific drugs and detailed therapeutic changes, potential drug interactions, side effects, treatment responses, and environmental effects such as hazardous wastes, and self-induced inputs/effects.

Consequently, "Effects of drugs and foreign compounds on biological systems were revised to include the basis of drug therapy, uses and disadvantages of drugs, mechanism of action,

TABLE 12

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED EDUCATION MODULES IN ROUND II OF STUDY

Module	Rank Sum	Kendall W	Chi-Square
Health Promotion and Wellness	98.0	0.344	91.50*
Primary Health Care Management	122.0		
Clinical Practicum	133.5		
Pharmacology	166.0		
Advanced Nursing Leadership	175.0		
Community-Based Education	180.0		
Clinical Nutrition	238.0		
Nursing Research	255.5		

*$p. < 0.001$ assuming Chi Square distribution with 7 df

physiological systems, biochemical effects, adverse effects, hazardous wastes, environmental effects, and self-induced inputs/effects.

The panel also suggested the development of an pharmacology module that includes a health promotion framework, experiences people have with drug Rx, and iatrogenics. For this reason, "Pharmacology in health promotion" was added to the questionnaire as a proposed module. The newly created module included: 1) "Reshaping health seeking behaviors"; 2) "Counseling and education" in the areas of health risk awareness, health care alternatives, informed personal health care decision making, and health promotion skills, services and support; 3) "Experiences people have with drug Rx and iatrogenics", and 4) "Behavioral aspects of taking and receiving drugs".

After reviewing the "Pharmacologic management" component the panel recommended the addition of the following concepts: laboratory/diagnostic tools/tests, prescriptive and over-the-counter medications, and several courses on primary health care for adults, child, and women. Thus, the "Pharmacologic management component was revised to include: laboratory and diagnostic tools/tests, primary health care for the adult and child and health care of women, prescriptive and nonprescriptive medications, and immunizations.

The need to include modalities that complement or replace drug management prompted the panel to suggest the development of a component identified as "Alternative health care management and healing strategies". Specifically, the panel recommended

the "Alternative health care management" component afford nurse practitioners knowledge and skill in the areas of therapeutic touch, massage, yoga, self-help, and acupuncture.

The rank order and sum of the proposed pharmacology components was derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed pharmacology components were identified in the following ascending order: 67.5 "Effects of drugs and foreign compounds on biological systems", 82.5 "Pharmacology in health promotion", 97.5 "Pharmacology management", 156.0 "Alternative health care management/healing strategies", and 166.5 "Immunopharmacology".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.550 suggesting a moderate agreement on the degree of importance of the proposed pharmacology modules among the participants. To statistically evaluate the significance of W a chi-square analysis was conducted. Using the result W = 0.550 the calculated value of chi-square is 38(4)(0.550) or 83.60.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 83.60 is significant beyond the 0.001 level. Consequently there appears to

be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 13 summarizes the rank sum of the proposed pharmacology components, average correlation among the participants during Round II, and chi-square analysis.

Proposed Clinical Nutrition Module

The proposed clinical nutrition module was also expanded and revised in accordance to the panel's directions. Utilizing the panel's input the module was enhanced by adding nutritional concepts and a health promotion framework. The process of revision resulted in the consolidation of the seven didactic components utilized during Round I to five proposed education components for Round II.

In follow up to the panel's recommendations the proposed module was modified by deleting the subheading "Community nutrition" component and moving the previously identified concepts under "Factors influencing dietary patterns". Thus, the second round questionnaire included the following education components: "Nutrition in health promotion", "Factors influencing dietary patterns", "Nutrition in disease", "Nutritional health assessment across the life span", and "Nutritional counseling and education across the life span".

To ensure a unified understanding of the revised clinical nutrition components the questionnaire afforded the panel an overview of suggested course content. As directed by the panel

TABLE 13

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED PHARMACOLOGY COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Effects of Drugs & Foreign Compounds	67.5	0.550	83.60*
Pharmacology in Health Promotion	82.5		
Pharmacologic Management	97.5		
Alternative Health Care	156.0		
Immunopharmacology	166.5		

*$p. < 0.001$ assuming Chi Square distribution with 4 df

the education component "Nutrition in health promotion" was added to enhance the nurse practitioner's expertise in the nutrition and exercise, balanced nutrition, nutritional deficits/excess, stress management, coping skills and strengths, reshaping health seeking behaviors, counseling/education. The component also emphasizes the involvement of community agencies in health awareness and health promotion programs.

To compliment "Nutrition in health promotion" the panel suggested the utilization of additional factors that influence dietary patterns and combining the "Nutrition and food behavior" and "Community nutrition" components. Thus, the combination of the two components prompted the development of a component identified as "Factors influencing dietary patterns".

As suggested by the panel a model program should not forget the environmental and cultural aspects that may impede client compliance. As a result the newly created component "Factors influencing dietary patterns" was designed to include the following aspects: physiological, environmental, community norms, mental/emotional, personal preferences and values, socioeconomic status, peer groups, cultural, lifestyle, and religion.

Based upon the panel's input "Nutrition in disease" was expanded to include disease effects on nutrient metabolism, physiological basis of nutrition care, biochemical basis of nutrition care and pharmacology interaction with nutrition.

To provide holistic primary health care management the panel suggested adding concepts and the terminology "across the life span"

to the "Assessment" and "Counseling" components. For this reason the "Assessment" component was renamed "Nutritional health assessment across the life span" and revised to include concepts in body measurements, lab studies, clinical signs of nutritional status, and dietary history.

Similarly the "Counseling" component was revised and renamed "Nutritional counseling/education across the life span. As recommended by the panel "diet therapy" and "nutrition and food behavior" was incorporated into the "Counseling" component. The panel also suggested community-based primary health care nurse practitioners require additional nutritional study in the following areas: exercise and geriatrics including management of malnutrition and medication effects on nutrition.

As deemed appropriate by the panel the following concepts were added to the "Nutritional counseling/education across the life span component: interaction of food use, food abuse and stress in the community, nutrition and exercise health promotion, food/nutrient intake according to age requirements, vitamin and mineral supplementation, developmental role of nutrition in disease prevention, geriatric nutritional and pharmacological management, and health resources.

The rank order and rank sum of the proposed clinical nutrition components were derived from the quantitative data obtained from the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed pharmacology components were identified in the following ascending order: 80.0 "Nutrition in health promotion";

98.5 "Nutritional health assessment across the life span; 109.5 "Nutritional counseling and education across the life span; 139.0 "Factors influencing dietary patterns", and 143.0 "Nutrition in disease".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.200 suggesting a very low agreement on the degree of importance of the proposed clinical nutrition components among the participants. To statistically evaluate the significance W a chi-square analysis was conducted. Using the result W = 0.200 the calculated value of chi-square is 38(4)(0.200) or 30.40.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 30.40 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 14 summarizes the rank sum of the panel responses for the proposed clinical nutrition module, average correlation among the participants for Round II, and chi-square analysis.

TABLE 14

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED CLINICAL NUTRITION MODULE IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Nutrition in Health Promotion	80.0	0.200	30.40*
Nutritional Health Assessment	98.5		
Nutritional Counseling/Education	109.5		
Factors Affecting Dietary Patterns	139.0		
Nutrition in Disease	143.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

Proposed Health Promotion

and Wellness Module

The panel commented that the concept of health promotion and wellness was of the utmost importance to the nurse practitioner and should therefore be integrated throughout the curriculum. The panel also suggested the module be consolidated to five components and revised to include additional health promotion concepts.

In response to the panel's recommendations the proposed health promotion and wellness module was modified for the second round questionnaire. To consolidate the proposed components "Common public health problems", "Epidemiology", and "Biobehavioral mechanisms of health" were transferred to the "Holistic health maintenance" component; "Health promotion programs", "Behavioral theories and concepts", and "Models of community-based health promotion and preventive care" were placed under a newly created component identified as "Community-based health promotion counseling and education", and the "Family systems theory" was moved to a newly created component identified as "Health promotion and the family".

As a result, the revised module for Round II presented the following components: "Holistic health maintenance", "Health promotion and the family", "Health assessment", "Community health goal strategies", and "Community-based health promotion counseling and education".

To ensure a unified understanding of the revised health promotion and wellness components the questionnaire afforded the panel an overview of suggested course content. As directed by the

panel the education component "Holistic health maintenance" was revised to include the following concepts: 1) global view of health; 2) prevention of illness; 3) maintenance of maximal function; 4) promotion of physical, mental, and social well-being; 5) biobehavioral mechanisms of health; 6) common public health problems amenable to screening and early diagnosis, and 7) epidemiology of infectious and chronic diseases.

After reviewing the "Family systems theory" component the panel commented that family dynamics, family assessment, and family counseling/evaluation were more critical than the systems theory. The panel also recommended the addition of health promotion concepts, anticipatory guidance, partnerships, networking, and evaluation to the "family systems theory". For this reason the component was renamed "Health promotion and the family" and was expanded to include the following concepts: dynamics, systems theory, assessment, counseling/education, anticipatory guidance, partnerships, networking sessions, and evaluation.

The "Health assessment" component was not revised during Round II. However, the panel confirmed that a physical assessment should be considered as basic preparation for nurse practitioners.

In accordance to the panel's recommendations the "Community health goal strategies" were expanded to include: networking, interdisciplinary team collaboration, policy development, organizational enhancement, counseling/education, and health services (e.g. immunizations).

The rank order and rank sum of the proposed pharmacology components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed pharmacology components were identified in the following ascending order: 77.5 "Health assessment"; 93.0 "Holistic health maintenance"; 112.5 "Health promotion and the family"; 136.0 "Community-based health promotion counseling and education", and 151.0 "Community health goal strategies".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.251 suggesting a low agreement on the degree of importance of the proposed health promotion and wellness components among the participants. To statistically evaluate the significance W a chi-square analysis was conducted. Using the result W = 0.251 the calculated value of chi-square is 38(4)(0.251) or 38.15.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 38.15 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 15 summarizes the rank sum of the responses for the proposed health promotion and wellness module, average correlation among the participants for Round II, and chi-square analysis.

Proposed Community-Based Health Education Module

The proposed community-based health education module for Round II was revised to emphasize health promotion, community-based measures to share information, and the role of nursing in a global society. The panel suggested renaming the "Principles of teaching and learning" component and adding the following concepts to the model program: networking, collaborative inter/agency organization, nursing aspects of international health care, and a health promotion philosophy and framework throughout the curriculum.

As suggested by the panel the title of the "Principles of teaching and learning" component was changed to "Adult learning strategies to promote health. In addition, examples of suggested learning strategies such as demonstrations, role playing, discussion sessions, symposiums, self-study, and field trips were cited to facilitate a mutual understanding of the component.

Health promotion measures were also added to the "Risk management education" component to better ensure the module reflected a health promotion philosophy and framework. However, the addition of a health promotion concept required a parallel revision of the component's title. For this reason the title "Risk

TABLE 15

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED HEALTH PROMOTION AND WELLNESS COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Health Assessment	77.5	0.251	38.15*
Holistic Health Maintenance	93.0		
Health Promotion and the Family	112.5		
Health Counseling and Education	136.0		
Community Health Goal Strategies	151.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

management education" utilized in the first round questionnaire was changed to "Health risk management education" in the second round questionnaire.

To avoid confusion in the subsequent questionnaires the content of the newly renamed "Health risk management education" component was identified in the second round questionnaire and included the: identification, evaluation, and correction of potential health and environmental risks that could lead to injury or illness.

Integration of a health promotion philosophy and framework throughout the curriculum also mandated the development of a new component identified in the second round questionnaire as "Health promotion/maintenance across the life span". The health promotion component was designed to present information on the factors that impact the client's health and ability to make informed decision-making. Thus, the "Health promotion and maintenance across the life span" component presented the following factors: 1) self-responsibility; 2) physical stamina and strength; 3) intellectual capacities; 4) stress control; 5) nutritional intake; 6) environmental control, and 7) financial self-reliance.

In addition to the integration of health promotion throughout the curriculum the panel also suggested that the community education aspects of the model might better relate to the aspects of community-based ways to share information. To accurately reflect a health promotion concept and community-based methods to share information required the development of an international health care component and the revision of the "Program design" component.

To facilitate a community-based method of sharing information the panel recommended the development of a component that would address the role of nursing in a global society. As a result the component of "International health care" was developed for the second round questionnaire and presented the role of nursing, networking, and opportunities for didactic study aboard.

The modification of the "Program design" component to reflect community-based methods to share information required the following revisions: 1) changing the name of the component to "Community-based program design for health promotion"; 2) including the "Health belief model" and "Economic, political, and ethical issues" as supporting program design concepts; 3) adding "Factors" that influence the educational process, and 4) identifying "Action plans" to implement community-based methods of sharing information.

To ensure a unified understanding of the revised "Community-based program design for health promotion" component the questionnaire afforded the panel an overview of suggested course content. Consequently, the second round questionnaire included the concepts of "Factors", "Health belief model", and "Action plans" for the "Community-based program design.

The "Factors" concept utilized a participant-oriented and intergenerational focus and afforded nurse practitioners knowledge and skills in the following areas: individual and community empowerment, networking and inter-agency organization collaboration, communication skills and assertiveness training, economic, political, and ethical issues, and health counseling and education.

To enhance the nurse practitioner's skills in developing health education programs that will advance the community's health and development the "Action plan" element utilized the following concepts: 1) community development, needs and assets assessment; 2) acquiring participant involvement; 3) goals, objectives, and planning expected outcomes; 4) creating a participative learning climate; 5) facilitating interaction among participants, and 6) developing teaching tools (handouts and audiovisuals).

By contrast the content of the "Health belief model" remained unchanged from the first round and included concepts such as: individual perceptions, modifying factors, and likelihood of client action.

The rank order and rank sum of the proposed community-based health education components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed community-based health education components were identified in the following ascending order: 73.5 "Community-based program design for health promotion"; 97.0 " Health promotion/maintenance across the life span; 98.0 "Health risk management education"; 123.5" Adult learning strategies", and 178.0 "International health care".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.441 suggesting a moderate agreement on the degree of importance of the proposed community-based health education components among the participants. To statistically evaluate the significance W a chi-square analysis was

conducted. Using the result W = 0.441 the calculated value of chi-square is 38(4)(0.441) or 67.03.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 67.03 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 16 summarizes the rank sum of the responses for the proposed health promotion and wellness module, average correlation among the participants for Round II, and chi-square analysis.

Proposed Primary Health Care Management Module

After evaluating the proposed "Management of health problems" module the panel recommended the curriculum content of the second round questionnaire be modified to place greater emphasis on health promotion, acute and chronic care management/treatment, and nursing strategies. However, to implement the suggested changes required the revision of the module's title and expansion of the two components.

TABLE 16

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED COMMUNITY-BASED HEALTH EDUCATION COMPONENTS IN ROUND II OF STUDY

Health Education Components	Rank Sum	Kendall W	Chi-Square
Program Design	73.5	0.441	67.03*
Health Promotion and Maintenance	97.0		
Health Risk Management Education	98.0		
Adult Learning Strategies	123.5		
International Health Care	178.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

The title of the module was changed from "Management of health problems" to "Primary health care management". Moreover, the revised "Primary health care management" module included the following components: 1) fundamentals of the wellness model; 2) health focus of the wellness model; 3) fundamentals of acute and chronic care management/treatment, 4) focus of acute and chronic care management/treatment, and 5) nursing strategies and interventions.

To ensure a unified understanding of the revised "Primary health care management" module the questionnaire afforded the panel an overview of suggested course content. As directed by the panel the education component "Fundamentals of the wellness model was added to enhance the nurse practitioners management and clinical decision making skills. In addition, the following concepts were included: global health, health care needs of population at risk, clinical decision making, and achieving an optimal level of health.

To compliment the "Fundamentals of the wellness model" the panel suggested the utilization of the "Health focus of the wellness model. This component afforded nurse practitioners didactic instruction on how to foster the client's health awareness, personal growth and self-actualization through counseling and education.

As recommended by the panel a model masters degree program should not forget the fundamentals and focus of the acute and chronic care management/treatment. The panel also suggested that a good foundation in pathophysiology, physiology, and physical

assessment was basic preparation for the community-based primary health care nurse practitioner.

The "Conceptual framework" component identified in the first round questionnaire was therefore revised. The "Fundamentals of acute and chronic care management and treatment" module replaced the "Conceptual framework" component and included: incidence, etiology, risk factors, physiology, pathophysiology, clinical manifestations, physical assessment as related to health problems, and diagnostic interventions.

To supplement the "Fundamentals of acute and chronic care management/treatment component the panel suggested the development of the "Focus of acute and chronic care management and treatment". As a result the focus of acute and chronic care management component: 1) included the use of the physical exam and diagnostic tests to identify treatments; 2) relied upon a problem solving approach to illness, 3) emphasized the client's defect or dysfunction, and 4) presented the physical and biologic aspects of diseases and conditions.

In like manner the "Managed care" component utilized in the first round questionnaire was renamed and revised in accordance to the panel's recommendation. "Nursing strategies and interventions" replaced the "Managed care" component. As recommended by the panel the following concepts formulated the basis of the proposed nursing strategies and interventions: 1) interdisciplinary team approach; 2) health promotion and maintenance skills, services, and support;

3) knowledge/use of data bases; 4) surveillance and management of health.

The rank order and rank sum of the proposed primary health care management components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed primary health care management components were identified in the following ascending order: 89.0 "Fundamentals of acute and chronic care management/ treatment"; 92.5 "Nursing strategies and interventions"; 113.0 "Focus of acute and chronic care management/treatment"; 124.5 "Fundamentals of the wellness model", and 151.0 "Health focus of the wellness model".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.178 suggesting a very low agreement on the degree of importance of the proposed primary health care management components among the participants. To statistically evaluate the significance of W a chi-square analysis was conducted. Using the result W = 0.178 the calculated value of chi-square is 38(4)(0.178) or 27.05.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 27.05 is significant beyond the 0.001 level. Consequently there appears to

be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 17 summarizes the rank sum of the responses for the proposed primary health care management module, average correlation among the participants for Round II, and chi-square analysis.

Proposed Nursing Research Module

General comments received on the returned questionnaires from Round I suggested the proposed nursing research module for the second round questionnaire be revised to include practice applications of nursing research, both qualitative and quantitative research methods, and a health promotion framework. To shift the focus of the module as directed by the panel required the development of two new components and the addition of new concepts to the proposed model masters degree program.

The second round questionnaire was subsequently revised to included components in: "Foundations", "Biostatistics and the interpretation of data"; "Practice applications of nursing research to promote health"; "Participation in research Activities", and "Major health promotion issues".

Based upon the panel's input the course content of the components were modified to reflect a focus on practice applications, qualitative research, and health promotion. To better ensure a unified understanding of the revised nursing research components the questionnaire afforded the panel an overview of suggested course content.

TABLE 17

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED PRIMARY HEALTH CARE MANAGEMENT COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Fundamentals of Care	89.0	0.178	27.05*
Practical Management Strategies	92.5		
Focus of Care	113.0		
Fundamentals of the Wellness Model	124.5		
Focus of the Wellness Model	151.0		

*$p. < 0.001$ assuming Chi Square distribution with 4 df

As directed by the panel the education component "Foundations" was revised to include: 1) research dimensions, tools, and design; 2) qualitative and participatory actions research methods; 3) data collection; 4) statistical analysis and interpretation; 5) research outcomes, and 6) presenting the Research report. The "Biostatistics" component also was modified to include interpreting data.

To afford nurse practitioners additional applied research opportunities in a health promotion framework the second round questionnaire adopted a newly created component entitled, "Practice applications of nursing research to promote health". The practice application component was designed to enhance the nurse practitioner's ability to: 1) use applied research, 2) critique nursing theory and research, 3) apply and analyze research techniques, 4) reshape client health seeking behaviors, and 5) counsel clients based upon research outcomes in the areas of health risk awareness, health care alternatives, informed decision making, and health promotion.

To further enhance the nurse practitioner's ability to provide community-based primary health care to currently underserved populations the panel recommended a research focus on practice. The component "Participation in research activities" was then added to the questionnaire. Course content for the "Participation in research activities" component included opportunities to read nursing research articles and share information on an international basis.

Development of a health promotion framework for the nursing research module required the revision of the "Major discipline questions" component. Specifically the component title was changed from "Major discipline to "Major health promotion issues" and the content of the component was modified to include noteworthy paradigm solutions to promote health.

The rank order and rank sum of the proposed nursing research components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed nursing research components were identified in the following ascending order: 65.5 "Practice applications of nursing research to promote health"; 83.5 "Foundations"; 130.0 "Biostatistics; 137.5 "Major health promotion issues"; and 153.5 "Participation in research activities".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.391 suggesting a low agreement on the degree of importance of the proposed nursing research components among the participants. To statistically evaluate the significance W a chi-square analysis was conducted. Using the result W = 0.391 the calculated value of chi-square is 38(4)(0.391) or 59.43.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance

less than 0.1% of the time, the observed chi-square of 59.43 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 18 summarizes the rank sum of the proposed nursing research module, average correlation among participants for Round II, and chi-square analysis.

Proposed Advanced Nursing Leadership Module

General comments on the returned questionnaires from Round I indicated the advanced nursing practice module should be revised to reflect leadership, a global emphasis, professional role development, group and community taxonomies, health promotion, and fiscal management. In addition, the panel suggested graduate programs should carefully consider prerequisite requirements. As a result the proposed advanced nursing practice module was renamed advanced nursing leadership and modified to include the following components: "Role development", "Nursing administration", "Fiscal management", "Finance alternatives", and "Health promotion conceptual framework".

To ensure a unified understanding of the revised advanced nursing leadership module the second round questionnaire afforded the panel an overview of the suggested course content. As directed by the panel the education component "Health promotion conceptual framework was added to the module to prepare the nurse practitioner

TABLE 18

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED NURSING RESEARCH COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Practice Applications	65.5	0.391	59.43*
Foundations	83.5		
Biostatistics/Interpreting Data	130.0		
Major Health Promotion Issues	137.5		
Research Activities	153.5		

*$p. < 0.001$ assuming Chi Square distribution with 4 df

as a community-based primary health care provider. Consequently, the component presented the following concepts: 1) taxonomies, diagnoses, interventions and health outcomes for the individual, family, and community; 2) reshaping health seeking behaviors; 3) care of the traditionally underserved populations; 4) international nursing; 5) interdisciplinary approach, 6) linkage between health, social, ethical, and legal issues; 7) ethical decision making models, and 8) debates.

A "Role development" component was also added to enhance the ability of the nurse practitioner to assume the role of a community-based primary health care provider. The component was therefore designed to present the following concepts: community role of the nurse practitioner as a professional citizen, caring as a moral ground for nursing, and issues such as professional leadership/ management, credentialing, change agent role, and marketing role.

To supplement the "Role development" component the panel suggested a component that provided the nurse practitioner health management/leadership including theories, models, and clinical application. Management and leadership theory models and application were considered to be vital to the nurse practitioner who often needs to contribute to the over-all clinic and agency administration. The panel's recommendations resulted in the development of the "Nursing administration" component for the second round questionnaire.

Health leadership skills are required to manage monetary resources when providing community-based primary health

care services to the underserved populations. For this reason the panel suggested the fiscal management module/components be addressed in the advanced nursing practice module.

Comments from the panel confirmed that basic knowledge of fiscal management and financial alternatives were needed by all nurse practitioners. However, sophisticated information on fiscal management and financial alternatives are required when the nurse practitioner anticipates managing a clinic entering a private practice situation.

To prepare the nurse practitioner for the practice setting the "Fiscal management" component include the following concepts: marketing and budgeting, cost accounting, benefit, and effectiveness, documentation requirements, computer skills for software applications, and impact of financing policies on health care delivery.

Whereas, the "Finance alternatives" component was designed to encourage the utilization of nurses in philanthropy and volunteers. The component also afforded the nurse practitioner information concerning the use of bonds for rural communities to establish clinics and help pay for operations. In addition, the component identified options for financial support such as monies from community, county, state, federal or insurers.

The rank order and rank sum of the proposed advanced nursing practice components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed advanced nursing practice

components were identified in the following ascending order: 63.0 "Role development"; 82.0 "Health promotion conceptual framework"; 121.0 "Fiscal management"; 136.0 "Nursing administration", and 168.0 "Finance alternatives".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.490 suggesting a moderate agreement on the degree of importance of the proposed advanced nursing practice components among the participants. To statistically evaluate the significance of W a chi-square analysis was conducted. Using the result W = 0.490 the calculated value of chi-square is 38(4)(0.490) or 74.48.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 74.48 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 19 summarizes the rank sum of the proposed advanced nursing practice module, average correlation among participants for Round II, and chi-square analysis.

TABLE 19

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED ADVANCED NURSING LEADERSHIP COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Role Development	63	0.490	74.48*
Conceptual Framework	82		
Fiscal Management	121		
Nursing Administration	136		
Finance Alternatives	168		

*$p. < 0.001$ assuming Chi Square distribution with 4 df

Proposed Clinical Practicum Module

The proposed clinical practicum module was revised to reflect and reinforce the community-based health promotion emphasis of the didactic instruction. As a result the clinical practicum module was modified to include the following components: clinical education strategies for health promotion, role opportunities, primary health care management opportunities, qualitative research investigation, and education outcomes.

To ensure a unified understanding of the revised clinical practicum components the second round questionnaire afforded the panel an overview of the suggested course content. As directed by the panel the "Clinical education strategies for health promotion" were added to provide an overall plan for the clinical practicum experience. The education strategies suggested for the clinical practicum included: using an internship model or post-graduate supervised experience, affording the nurse practitioner 1000 to 3500 actual practice hours; preparing the nurse practitioner for team practice, providing clinical experiences using the wellness model and acute/chronic care management, and enhancing the nurse practitioner's professional competence through continuing education.

The panel also suggested the addition of two components entitled: "Role opportunities" and "Primary health care management opportunities" to prepare the nurse practitioner for team practice in the delivery of community-based primary health care.

The panel recommended that the clinical practicum module should afford the nurse practitioner a broad basis for practice in a variety of settings such as international settings, nursing homes, community-based health centers and shopping centers. The panel selected the community as the target of the clinical practicum and suggested educators utilize community organizations/ sites. Members of the panel acknowledged that the availablity of clinical sites are likely to vary by geographic region but what is important is the content and clinical role opportunities rather than sites per se. Thus the "Role opportunities" component was designed to offer supervised clinical rotations in both an international setting and community-based systems.

The panel recommended the clinical practicum include a holistic view with a variety of well rounded experiences including treatment protocols and diagnostic interventions. For this reason the "Primary health care management opportunities" component was developed to provide the nurse practitioner experience with the wellness model and acute and chronic care management. The primary health care management opportunities included: physical assessment and health risk appraisal, diagnostic/screening interventions, decision making, health promotion skills, services, and support, and treatment referrals.

As suggested by the panel a model masters program must also afford the nurse practitioner an opportunity to utilize qualitative and participatory action research methods. In response to the panel's recommendations a "Qualitative research investigation"

component was added to the module. The qualitative research component was designed to offer the nurse practitioner an opportunity to conduct investigative research and to examine the variables in the community setting.

To evaluate the nurse practitioner's degree of success in meeting the goals and objectives of the masters program the panel recommended adding an "Educational outcomes" component. Evaluation criteria included the ability of the nurse practitioner to provide/manage the delivery of primary health care services and to work as an interdisciplinary team member.

The rank order and rank sum of the proposed clinical practicum components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed clinical practicum components were identified in the following ascending order: 72.0 "Primary health care management opportunities; 83.0 "Clinical education strategies for health promotion"; 106.5 "Educational outcomes"; 142.0 "Role opportunities", and 166.5 "Qualitative research investigation".

Computation of the panel's rank order responses provided a Kendall coefficient of concordance W of 0.438 suggesting a moderate agreement on the degree of importance of the proposed clinical practicum components among the participants. To statistically evaluate the significance of W a chi-square analysis was conducted. Using the result W = 0.438 the calculated value of chi-square is 38(4)(0.438) or 66.58.

To determine the significance of the observed chi-square value a chi-square distribution statistical table was consulted. Using the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 66.58 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants prompting the rejecting of the null hypothesis.

Table 20 summarizes the rank sum of the proposed clinical practicum module, average correlation among participants for Round II, and chi-square analysis.

Round III

The third and final questionnaire was revised to contain eight education modules and 34 components based upon the comments and recommendations received from the panel during Round II. The education modules and components were listed in the rank order as determined by Round II. To establish a group consensus the questionnaire for Round III elicited the participant's concurrence or disagreement with the rank order determination from Round II.

As the questionnaire booklets were received comments and recommendations were listed on a master sheet under the appropriate education module (See Appendix N). Analysis of data from the returned questionnaires for the third round also included the rank

TABLE 20

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED CLINICAL PRACTICUM COMPONENTS IN ROUND II OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Management Opportunities	72.0	0.438	66.58*
Clinical Education Strategies	83.0		
Educational Outcomes	106.5		
Role Opportunities	142.0		
Qualitative Research Investigation	166.5		

*p. < 0.001 assuming Chi Square distribution with 4 df

sum of responses, average correlation of respondents using Kendall's Coefficient of Concordance W, and chi-square distribution.

Proposed Education Modules

In Round III each participant was invited to review the rank order sequence of the proposed education modules as established during the second round questionnaire. Each participant was given the opportunity to agree or disagree with the group response. By affording the panel an opportunity to agree or disagree with the group's decision the third round questionnaire meet another goal of the research, consensus of agreement. Individual responses to the group process did result in a lower rank sum and stronger correlation among participants as demonstrated by Kendall's Coefficient of Concordance W and chi-square analysis. However, the rank order sequence of the proposed education modules was not altered.

The rank order sequence of the proposed education modules were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed education modules were identified in the following ascending order: 42.5 "Health promotion and wellness"; 79.5 "Primary health care management"; 106.5 "Clinical practicum"; 142.0 "Pharmacology"; 171.5 "Advanced nursing leadership"; 197.0 "Community-based health education"; 233.0 "Clinical nutrition"; and 252.0 "Nursing research".

As determined by Kendall's coefficient of concordance W the average agreement among the participants increased from low (0.344) to strong (0.790) during Round III. To determine the statistical significant of W a chi square analysis was conducted.

Using the result W = 0.790 the calculated value of chi-square for Round III was 34(7)(0.790) or 188.02, an 96.52 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 7 degrees of freedom a chi-square of 24.32 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 24.32 or larger happen by chance less than 0.1% of the time, the observed chi-square of 188.02 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed education modules prompting the rejection of the null hypothesis.

Table 21 summarizes the rank sums of the proposed education, modules, average agreement among participants during Round III, and chi-square analysis.

Proposed Pharmacology Module

The comments from the panel during Round II confirmed the proposed pharmacology module presumed the appropriate science background including immunology. The panel recommended the following revisions to the third round questionnaire: 1) moving

TABLE 21

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED EDUCATION MODULES IN ROUND III OF STUDY

Proposed Education Modules	Rank Sum	Kendall W	Chi-Square
Health Promotion and Wellness	42.5	0.790	188.02*
Primary Health Care Management	79.5		
Clinical Practicum	106.5		
Pharmacology	142.0		
Advanced Nursing Leadership	171.5		
Community-Based Education	197.0		
Clinical Nutrition	233.0		
Nursing Research	252.0		

*p. < 0.001 assuming Chi Square distribution with 7 df

"Alternative health care management/healing strategies" to the "Primary care management" module; 2) moving immunopharmacology to the "Effects of drugs and foreign compounds on biological systems, and 3) creating a new component to present issues in pharmacology.

As directed by the panel the "Pharmacology issues" component was designed to include provider addictions, abuse, overuse of medications, prescriptions as power over clients, and legal aspects. In addition, experiences people have with drug prescriptions and iatrogenics and behavioral aspects of taking/receiving drugs were moved from the "Pharmacology in health promotion" component to the "Pharmacology issues" component.

As a result of the comments received during the second round the proposed pharmacology module was revised to include the three recommended components: "Effects of drugs and foreign compounds on biological systems", "Pharmacologic management to promote health", and "Pharmacology issues".

The rank order and rank sum of the proposed pharmacology components were derived from the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed pharmacology components were identified in the following ascending order: 38.0 "Effects of drugs and foreign compounds on biological systems; 64.0 "Pharmacologic management to promote health"; and 102.0 "Pharmacology issues".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from moderate (0.550) in Round II to very high (0.896) in Round III. To determine

the statistical significance of W a chi-square analysis was conducted.

Using the result W = 0.896 the calculated value of chi-square for Round III was 34(2)(0.896) or 60.93, a 22.67 point decrease from Round II. However, the decrease in the chi-square value was not related to a lower W but rather to the reduction of the degrees of freedom based upon the revision of the module during Round III. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 2 degrees of freedom a chi-square of 13.82 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 13.82 or larger happen by chance less than 0.1% of the time, the observed chi-square of 60.93 is significant beyond the 0.001 level. Consequently there appears to be a consensus among the participants on the proposed pharmacology components prompting the rejection of the null hypothesis.

Table 22 summarizes the rank sums of the proposed pharmacology components, average agreement among participants during Round III, and chi-square analysis.

Proposed Clinical Nutrition Module

After reviewing the proposed clinical nutrition components during Round II the panel expressed a concern that the didactic instruction for the "nutrition in disease" and "nutrition in health

TABLE 22

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED PHARMACOLOGY COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Effects of Drugs & Foreign Compounds	38	0.896	60.93*
Pharmacologic Management	64		
Pharmacology Issues	102		

*p. < 0.001 assuming Chi Square distribution with 2 df

promotion" components should really be a part of the basic registered nurse education at the undergraduate level.

To revise module for the third round questionnaire the panel deleted the term "disease" in the "nutrition in disease" component as the process of nutrition is essential for proper body functioning and the maintenance of health. For this reason the component identified in the second round questionnaire as "nutrition in disease" was revised to reflect health and renamed "nutritional therapy and health maintenance". The proposed concepts for the "nutritional therapy and health maintenance" component included: nutrient metabolism, physiological and biochemical basis of nutrition care, pharmacology interaction with nutrition, and informed decision making.

In follow up to the panel's recommendation the "nutrition in health promotion" component heading was deleted. However, to maintain the health promotion framework throughout the model the health promotion concepts of the "nutrition in health promotion" component were placed under the "nutritional counseling and education to promote health across the life span" as possible client services and strategies.

The panel also suggested the "nutritional health assessment across the life span" component be considered as a clinical application for the "nutrition in health promotion" component. Consequently, the concepts presented in the "nutritional health assessment across the life span" were transferred to the clinical

decision making element of the clinical practicum "primary health care management opportunities" component.

In reference to the "nutritional counseling and education to promote health across the life span" the panel added nutritional assessment and intergenerational cycles. Based upon the panel's recommendations the "nutritional counseling and education to promote health across the life span" component was revised to include: health promotion skills, services, and support; nutritional and emotional health assessment, health risk awareness, intergenerational cycles, and reshaping health seeking behaviors.

To assist the community-based nurse practitioner in the clinical management of nutritional care the panel added a component entitled "practical management strategies".

Furthermore, the component presented the following concepts: 1) informational networking, 2) treatment referrals, 3) involvement of community agencies and resources to enhance health awareness and health promotion programs, 4) geriatric nutritional and pharmacological management, and 5) health care alternatives.

The rank order and rank sum of the proposed clinical nutrition components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed clinical nutrition components were identified in the following ascending order: 37.0 "Nutritional counseling and education to promote health across the life span"; 69.0 "Nutrition and health maintenance"; 101.0 "Practical management

strategies"; 133.0 "Factors influencing dietary patterns/client compliance".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from very low (0.200) in Round II to very high (0.886) in Round III. The panel's comments received during the third round questionnaire suggested the clinical nutrition module was well covered and organized logically.

To determine the statistical significant of W a chi-square analysis was conducted. Using the result W = 0.886 the calculated value of chi-square for Round III was 34(3) (0.886) or 90.37, a 59.97 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 3 degrees of freedom a chi-square of 16.27 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 16.27 or larger happen by chance less than 0.1% of the time, the observed chi-square of 90.37 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed clinical nutrition components suggesting the rejection of the null hypothesis.

Table 23 summarizes the rank sum of the proposed clinical nutrition components, average correlation among participants for Round III, and chi-square analysis.

TABLE 23

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED CLINICAL NUTRITION COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Counseling and Education	37.0	0.886	90.37*
Nutritional therapy and Health Maintenance	69.0		
Practical Management Strategies	101.0		
Factors Affecting Dietary Patterns	133.0		

*p. < 0.001 assuming Chi Square distribution with 3 df

Proposed Health Promotion

and Wellness Component

In reference to the proposed "Health promotion and wellness module" the panel recommended transferring the component "Community-based health promotion counseling and education" to the "Community-based health education module" and moving the "Health promotion and maintenance across the life span" component from the "Community-based health education module" to the "Health promotion and wellness module".

The panel also added a health promotion philosophical framework and family/community emphasis across the life span to the "Health promotion and wellness module". Moreover, the panel explained that a health promotion philosophy or framework should appear first since all else would flow from that concept.

In follow up to the panel's recommendation the health promotion and wellness module for Round III was revised and included the following components: "Philosophy of health promotion"; "Family/community holistic assessment and health promotion"; "Family/community health maintenance across the life span"; "Family/community health promotion and wellness strategies", and "Family/community health promotion and wellness outcomes".

To ensure a unified understanding of the revised health promotion and wellness module the questionnaire afforded the panel an overview of suggested course content. As directed by the panel the fundamental belief or philosophy of health promotion includes

achieving an optimal level of health and well-being and fostering health awareness, personal growth, and self-actualization.

To assist the individual to achieve an optimal level of health the panel added the concepts of health risk appraisal across the life span and workplace, community, and environment assessment to the "Family/community holistic assessment and health promotion" component.

Additions to the "Family/community health maintenace across the life span" component included maintaining health across the life span; workplace, community, and environmental change, and influencing factors.

The development of an action plan to raise the client's general level of health and well-being was presented in the "Family/community health promotion and wellness strategies" component. The emphasis of the health promotion and wellness strategies included: individual and family counseling and evaluation, anticipatory guidance and partnerships, informational networking, knowledge/use of data bases, interdisciplinary team collaboration, and clinical decision making.

The process of evaluating the health promotion strategies was identified in the "Family/community health promotion and wellness outcomes" component. Specifically, the outcomes of health promotion included organizational enhancement, health policy development, achieving an optimal level of health, and health counseling/education.

The rank order and rank sum of the proposed health promotion and wellness components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed health promotion and wellness components were identified in the following ascending order: 37.0 "Philosophy of health promotion"; 72.0 "Family/ community assessment and health promotion"; 102.0 "Family/community health maintenance across the life span"; 130.0 "Family/community health promotion and wellness strategies", and 169.0 "Family/ community health promotion and wellness outcomes".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from very low (0.251) in Round II to very high (0.899) in Round III. Moreover, the panel commented that the family/community health promotion and wellness strategies are important to the nurse practitioner and were inclusive and easy to follow.

To determine the statistical significant of W a chi-square analysis was conducted. Using the result W = 0.899 the calculated value of chi-square for Round III was 34(4) (0.899) or 122.26, an 84.11 point increase from Round II. To Evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed

chi-square of 122.26 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed health promotion and wellness components suggesting the rejection of the null Hypothesis.

Table 24 summarizes the rank sum of the proposed health promotion and wellness components, average correlation among participants for Round III, and chi-square analysis.

Proposed Community-Based Health Education Module

After reviewing the proposed "Community-based health education" module the panel made additional modifications to the third round questionnaire. Specifically the panel recommended utilizing the following components: "Health counseling and education framework"; "Health counseling and education program strategies"; "Health counseling and education issues"; "Health risk management education", and "International health care".

To ensure a unified understanding of the revised community-based health education module the questionnaire afforded the panel an overview of suggested course content. As directed by the panel the education component "Health counseling and education framework" was designed to include participant-oriented intergenerational focus, motivational program components to promote health, health promotion and risk behavioral theories and concepts, models of community-based health promotion/preventive care, and the health belief model.

TABLE 24

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED HEALTH PROMOTION AND WELLNESS COMPONENTS IN ROUND III OF STUDY

Family/Community Components	Rank Sum	Kendall W	Chi-Square
Health Promotion Philosophy	37.0	0.899	122.26*
Holistic Assessment and Health Promotion	72.0		
Holistic Health Maintenance	102.0		
Health Promotion Strategies	130.0		
Wellness Outcomes	169.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

To compliment the "Health counseling and education framework" component the panel suggested the utilization of "Health counseling and education program strategies". This component was designed to include the community-based approaches to share information and promote health. The course content for the "Health counseling and education program strategies" component include a health promotion/preventive care program design for culturally and economically diverse population, adult learning strategies, action plans, and evaluation.

Based upon the panel's recommendations the "Health counseling and education issues" component was developed to include the following concepts: economic, political, and ethical issues, health needs and resources of community subpopulations, and socioeconomic problems affecting health promotion.

The "International health care" component was expanded to include the international health policy, systems, administration, delivery, economics, and evaluation.

The rank order and rank sum of the proposed community-based health education components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed community-based health education components were identified in the following ascending order: 53.0 "Health counseling and education program strategies"; 61.0 "Health counseling and education framework"; 90.0 "Health risk management education"; 136.0 "Health counseling and education issues", and 170.0 "International health care".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from moderate (0.441) in Round II to very high (0.866) in Round III. In addition, the panel's comments from the third round questionnaire suggested the community-based health education module was well-organized.

To determine the statistical significant of W a chi-square analysis was conducted. Using the result W = 0.866 the calculated value of chi-square for Round III was 34(4) (0.866) or 117.78, a 50.75 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 117.78 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed community-based health education components suggesting the rejection of the null hypothesis.

Table 25 summarizes the rank sum of the proposed community-based health education components, average correlation among participants for Round III, and chi-square analysis.

TABLE 25

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED COMMUNITY-BASED HEALTH EDUCATION COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Program Strategies	53.0	0.866	117.78*
Counseling/Education Framework	61.0		
Health Risk Management Education	90.0		
Counseling/Education Issues	136.0		
International Health Care	170.0		

*$p. < 0.001$ assuming Chi Square distribution with 4 df

Proposed Primary Health

Care Management Module

After reviewing the proposed primary health care management module the panel revised the concepts and components for the third round questionnaire. To reduce the possibility of redundancy in the curriculum the panel transferred the "Fundamentals and focus of the wellness model" and "Nursing strategies and interventions" to the Health promotion and wellness module.

The panel also identified two areas of repetitive didactic content in the "Fundamentals and focus of the acute and chronic care management/treatment component. For this reason, the panel directed the use of pathophysiology and clinical manifestations and the deletion of the biologic aspects of diseases and conditions and client's defect or dysfunction. In addition, the panel utilized the fundamentals and focus of acute and chronic care and health wellness to formulate the component entitled "Basis for identifying management interventions.

To provide a unified understanding of the revised module the questionnaire afforded the panel an overview of the course content. As directed by the panel the component "Basis for identifying management interventions was developed to include: clinical decision making, global health care, achieving an optimal level of health, fundamentals and focus of acute and chronic care, and evaluation of health outcomes.

Whereas, the "Community-based holistic primary health care management" component was designed to included the dynamics of

holistic care, health-preventive services, community-based health promotion, health risk appraisal, treatment referrals, and out-patient health-illness client management.

To reinforcement the learning process the panel transferred the component "Alternative health care management and healing strategies" from the pharmacology module to the primary health care management module. The panel commented that the usage of the terms alternative health care management and healing strategies seemed to diminish the component's importance. Consequently, the panel renamed the component "Alternative health care management and healing strategies" to "Traditional health and healing modalities. Comments received during the third round confirmed it was wise to move the traditional health and healing modalities to the primary health care management module. The panel added that when the traditional health and healing modalities is utilized in the primary health care module there is an increase in the reinforcement of learning.

The rank order and rank sum of the proposed primary health care components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed primary health care components were identified in the following ascending order: 42.0 "Basis for identifying management interventions"; 64.0 "Holistic primary health care management", and 98.0 "Traditional health and healing modalities".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from very low (0.178) in Round II to strong (0.689) in Round III. The panel also commented that the module was well developed and elicited critical thinking.

To determine the statistical significant of W a chi-square analysis was conducted. Using the result W = 0.689 the calculated value of chi-square for Round III was 34(2) (0.689) or 46.85, a 19.80 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 2 degrees of freedom a chi-square of 13.82 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 13.82 or larger happen by chance less than 0.1% of the time, the observed chi-square of 46.85 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed primary health care management components suggesting the rejection of the null hypothesis.

Table 26 summarizes the rank sum of the proposed primary health care management components, average correlation among participants for Round III, and chi-square analysis.

Proposed Nursing Research Module

After reviewing the proposed nursing research module the panel recommended the following changes for the third round questionnaire

TABLE 26

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED PRIMARY HEALTH CARE MANAGEMENT COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Basis of Identifying Interventions	42	0.689	46.85*
Community-based Holistic Primary Health Care Management	64		
Health and Healing Modalities	98		

*p. < 0.001 assuming Chi Square distribution with 2 df

adding an international aspect of sharing research information to the components entitled "Participation in research activities" and "Major health promotion issues". The panel also commented that the international aspect of nursing is especially important today due to the global supply of commodities and mobility of the populace. Likewise, the panel enhanced the concepts of the "Biostatistics" component by adding statistical analysis and data interpretation.

To demonstrate that nursing is largely based on research not intuition the panel transferred the qualitative research investigations component from the clinical practicum module to the nursing research module under the component "Practice application of nursing research to promote health".

The rank order and rank sum of the proposed nursing research components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed nursing research components were identified in the following ascending order: 39.0 "Practice applications of nursing research to promote health"; 75.0 "Foundations"; 109.0 "Biostatistics"; 129.0 "Major health promotion issues"; and 158.0 "Participation in research activities".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from low (0.391) in Round II to strong (0.745) in Round III. To determine the statistical significant of W a chi-square analysis was conducted.

Using the result W = 0.745 the calculated value of chi-square for Round III was 34(4)(0.745) or 101.32, a 41.89 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 101.32 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed nursing research components suggesting the rejection of the null hypothesis.

Table 27 summarizes the rank sum of the proposed nursing research module, average correlation among participants for Round III, and chi-square analysis.

Proposed Advanced Nursing
Leadership Module

After reviewing the proposed advanced leadership components the panel confirmed that the module did identify and define inherent aspects of role development for the community-based primary health care nurse practitioner. To further refine the advanced leadership module for the third round questionnaire the panel added the following concepts to the "Role development" component: historical aspects, professional role development as consultant,

TABLE 27

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED NURSING RESERACH COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Practice Applications	39.0	0.745	101.32*
Foundations	75.0		
Biostatistics	109.0		
Major Health Promotion Issues	129.0		
Research Activities	158.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

researcher, teacher, and clinician, and legal, political action, and feminist issues.

The panel also recommended enhancing the leadership concepts identified for the "Nursing administration/leadership component. In follow up to the panel's suggestions the following leadership concepts were added to the component: policy development, practice management, conflict manager/negotiator, grant writing, and program analysis, management, and evaluation.

The rank order and rank sum of the proposed advanced nursing leadership components were derived from the quantitative data afforded by the Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed advanced nursing leadership components were identified in the following ascending order: 41.0 "Role development"; 72.0 "Health promotion conceptual framework"; 103.0 "Fiscal management"; 125.0 "Nursing administration/leadership, and 169.0 "Finance Alternatives".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from moderate (0.490) in Round II to very high (0.834) in Round III. Comments documented on the third round questionnaire suggested the module now identified inherent areas to facilitate the nurse practitioner's role development.

To determine the statistical significant of W a chi-square analysis was conducted. Using the result W = 0.834 the calculated value of chi-square for Round III was 34(4) (0.834) or 113.42, a 38.94 point increase from Round II. To evaluate the statistical

significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 4 degrees of freedom a chi-square of 18.46 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 18.46 or larger happen by chance less than 0.1% of the time, the observed chi-square of 113.42 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed advanced nursing practice components suggesting the rejection of the null hypothesis.

Table 28 summarizes the rank sum of the proposed advanced nursing practice module, average correlation among participants for Round III, and chi-square analysis.

Proposed Clinical Practicum Module

The proposed clinical practicum module for the third round questionnaire was revised and enhanced in accordance to the panel's directions. As a result the proposed module was modified in the following ways: 1) increasing the number of supervised clinical hours to a minimum of 3500; 2) adding client evaluation and health risk appraisal to the "Primary health care management opportunities" component; 3) transferring "Qualitative research investigation" to the nursing research module, and 4) adding nurse advocate and activist to the "Educational outcomes" component.

The rank order and rank sum of the proposed clinical practicum components were derived from the quantitative data afforded by the

TABLE 28

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED ADVANCED NURSING LEADERSHIP COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Role Development	41.0	0.834	113.42*
Conceptual Framework	72.0		
Fiscal Management	103.0		
Nursing Administration	125.0		
Finance Alternatives	169.0		

*p. < 0.001 assuming Chi Square distribution with 4 df

Likert-type perception scale. Based upon the panel's responses the rank sums of the proposed clinical practicum components were identified in the following ascending order: 34.5 "Primary health care management opportunities"; 69.5 "Clinical education strategies for health promotion"; 104.0 "Educational outcomes", and 132.0 "Role opportunities".

As determined by Kendall's Coefficient of Concordance W the average agreement among the participants increased from moderate (0.438) in Round II to very high (0.927) in Round III. To determine the statistical significant of W a chi-square analysis was conducted.

Using the result W = 0.927 the calculated value of chi-square for Round III was 34(3)(0.927) or 94.55, a 27.97 point increase from Round II. To evaluate the statistical significance of the observed chi-square value a chi-square distribution table was consulted.

Based upon the chi-square distribution table and 3 degrees of freedom a chi-square of 16.27 is needed for the difference to be significant beyond the 0.001 level. Since chi-squares of 16.27 or larger happen by chance less than 0.1% of the time, the observed chi-square of 94.55 is significant beyond the 0.001 level. Consequently, there appears to be a consensus among the participants on the proposed clinical practicum components suggesting the rejection of the null hypothesis.

Table 29 summarizes the rank sum of the proposed clinical practicum module, average correlation among participants for Round III, and chi-square analysis.

TABLE 29

RANK SUM, AVERAGE CORRELATION, AND CHI-SQUARE ANALYSIS OF THE PROPOSED CLINICAL PRACTICUM COMPONENTS IN ROUND III OF STUDY

Components	Rank Sum	Kendall W	Chi-Square
Management Opportunities	34.5	0.927	94.55*
Clinical Education Strategies	69.5		
Educational Outcomes	104.0		
Role Opportunities	132.0		

*p. < 0.001 assuming Chi Square distribution with 3 df

Summary

Chapter IV presented the response rate, statistical analysis, and results of the three round modified delphi study. Of the 48 purposively selected health care professionals who agreed to participate in the study, 34 respondents or 71% completed the entire project.

Two research questions were addressed:

1. What education modules are necessary at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings?

2. What are the necessary components for each education module at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings?

To identify a model masters degree program the panel rank ordered the proposed education modules and components utilizing a Likert-type perception scale. The rank order responses were based upon the degree of importance for each of the proposed education module and component based upon the anticipated role of the primary health care nurse practitioner in a reformed delivery system.

In addition, the panel recorded additions and comments regarding the model masters degree program under the "Recommendation Section" of the questionnaire booklet. Based upon the panel's input and rank order responses the proposed education modules and components were identified and refined.

Kendall's coefficient of concordance W and chi-square analysis were utilized to statistically evaluate the rank order responses of the panel. In fact, the values of W and chi-square were statistically significant suggesting the panel did achieve a shared vision on the necessary education modules and components.

Findings of the Study

1. The necessary education modules for a model masters degree program in rank order are: Health and wellness; primary health care management; clinical practicum; pharmacology; advanced nursing leadership; community-based health education; clinical nutrition, and nursing research.

2. The necessary education components for a model masters degree program in rank order are:

Health Promotion and Wellness Components
1. philosophy of health promotion
2. family/community holistic assessment and health promotion
3. family/community health maintenance across the life span
4. family/community health promotion and wellness strategies
5. family/community health promotion and wellness outcomes

Primary Health Care Management Components
1. basis for identifying management interventions
2. community-based holistic primary health care interventions
3. traditional health and healing modalities

Clinical Practicum Components
1. primary health care management opportunities
2. clinical education strategies for health promotion
3. educational outcomes
4. role opportunities

Pharmacology Components
1. effects of drugs and foreign compounds on biological systems
2. pharmacologic management to promote health
3. pharmacology issues

Advanced Nursing Leadership Components
1. role development
2. health promotion conceptual framework
3. fiscal management
4. nursing administration/leadership
5. finance alternatives

Community-Based Health Education
1. program strategies
2. framework
3. health risk management education
4. issues

Clinical Nutrition
1. nutritional counseling and education to promote health across the life span
2. nutritional therapy and health maintenance
3. practical management strategies
4. factors influencing dietary patterns/client compliance

Nursing Research
1. practice applications of nursing research to promote health
2. foundations
3. biostatistics
4. major health promotion issues
5. participation in research activities

3. Participants have very high agreement on the components necessary for the modules of pharmacology, clinical nutrition, health promotion and wellness, community-based health education, advanced nursing leadership, and clinical practicum.

4. Participants have strong agreement on the necessary education modules for a model masters program and components for the modules of primary health care management and nursing research.

Chapter V presents a summary, conclusions, implications, and recommendations.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

The content of this chapter is divided into four sections. A summary of the study is presented in the first section followed by the conclusions and implications of the study. Recommendations for practice and further research are contained in the final section.

Summary

The purpose of this study was to identify through expert consensus a model masters degree program in nursing (MSN) to prepare professional nurses as primary health care nurse practitioners to work in community-based settings. The research methodology used to identify the model masters degree program was a modified delphi technique that utilized a series of mailed questionnaires. Each round of the modified delphi technique moved toward the final goal of consensus by inviting the participants to rank order the proposed education modules and components by degree of importance on three separate questionnaires.

The study sought to answer the following questions:

1. What education modules are necessary at the masters level to prepare professional nurses as community-based primary health care nurse practitioners?

2. What are the necessary components for each education module at the masters level to prepare professional nurses as community-based primary health care nurse practitioners? The review of literature indicated that the provision of primary health care in a restructured delivery system requires educators to envision a new type of professional preparation, at the masters level, to prepare professional nurses with specialized knowledge and skills. Identification of an exemplary masters program will assist educators to envision graduate programming in a new light and facilitate educational reform that parallels health care reform.

The study was conducted among health care professionals across the United States and Canada. Seventy-nine health care professionals were contacted and 48 agreed to participate in a three round questionnaire. Thirty-four participants completed the project.

A modified delphi project was used to arrive at a group consensus on the education modules and components necessary at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings. A modified delphi technique allowed group consensus to be achieved through a series of questionnaires working progressively toward agreement. In addition, a modified delphi technique prevents a consensus from being influenced by stronger personalities in that group ranks are only known in the last round.

In the first round of the study participants were invited to indicate the degree of importance of the components for each

proposed module. Participants were also encouraged to record any additions or comments under the "Recommendation Section" of the booklet. Likert scale perception rankings for the proposed education components ranged from one ("of no importance") to five ("of critical importance").

Based upon the panel's recommendations from Round I the second round questionnaire was developed. As indicated by the mean ratings each component of the education modules were felt to be of at least some importance. Moreover, three or more of the participants identified all components as being of critical importance. For this reason, all components from the pilot study were included in the first round questionnaire. The questionnaire for Round II also invited the participants to rank order the proposed education modules and components by degree of importance. The Likert scale perception rankings for the eight proposed education modules ranged from one (most critical) to eight (minimal). In like manner, rankings for the proposed education components ranged from one (most critical) to five (minimal).

Based upon the panel's recommendations received during round II the final questionnaire was developed. Each of the proposed education modules and components were listed in rank order as determined during Round II. The purpose of the third questionnaire was to establish a group consensus on the rank order determination from Round II.

To assess the average agreement among the participants during the modified delphi procedure the rankings of the proposed education

modules and components were analyzed utilizing Kendall's coefficient of concordance W and Chi-Square distribution.

Summary of Results

Question 1. What education modules are necessary at the masters level to prepare professional nurses as primary health care nurse practitioners in community-based settings?

The necessary education modules for a model masters degree program in rank order are: Health promotion and wellness; primary health care management; clinical practicum; pharmacology; advanced nursing leadership; community-based health education; clinical nutrition; and nursing research. As suggested by Kendall's coefficient of concordance W, the average agreement among participants on the necessary education modules was strong ($W = 0.790$) and chi-square (188.02, $p < 0.001$, $df=7$) was statistically significant.

Question 2. What are the components of the education modules at the masters level to prepare professional nurses as primary health care nurse practitioners in community-based settings?

The components of the health promotion and wellness module in rank order are: Philosophy of health promotion; family/community holistic assessment and health promotion; family/community holistic health maintenance across the life span; family/community health promotion and wellness strategies, and family/community health promotion and wellness outcomes. As suggested by Kendall's coefficient of concordance W, the average agreement on the health

promotion and wellness module was very strong (W = 0.899) and Chi-square (122.26, $p < 0.001$, df=4) was statistically significant.

The components of the primary health care module in rank order are: Community-based acute and chronic management/treatment; primary health care nursing interventions, and traditional health and healing modalities. As suggested by Kendall's coefficient of concordance W, the average agreement on the primary health care module was strong (W = 0.689) and chi-square (46.85 $p < 0.001$, df=2) was statistically significant.

The components of the clinical practicum module in rank order are: Primary health care management opportunities; clinical education strategies for health promotion; educational outcomes; and role opportunities. As suggested by Kendall's coefficient of concordance W, the average agreement on the clinical practicum module was very strong (0.927) and chi-square (94.55, $p < 0.001$, df=3) was statistically significant.

The components of the pharmacology module in rank order are: Effects of drugs and foreign compounds on biological systems; pharmacologic management to promote health; and pharmacology issues. As suggested by Kendall's coefficient of concordance W, the average agreement on the pharmacology components was very high (W = 0.896) and chi-square (60.93, $p < 0.001$, df=2) was statistically significant.

The components of the advanced nursing leadership module in rank order are: Role development; health promotion conceptual framework; fiscal management; nursing administration and leadership; and

finance alternatives. As suggested by Kendall's coefficient of concordance W, the average agreement on the pharmacology components was very high (W = 0.834) and chi-square (113.42, $p < 0.001$, df=4) was statistically significant.

The components of the community-based health education module in rank order are: Health counseling and education program strategies; health counseling and education framework; health risk management education; health counseling and education issues, and international health care. As suggested by Kendall's coefficient of concordance W, the average agreement among the participants on the community-based health education components was very high (0.866) and chi-square (117.78, $p < 0.001$, df=4) was statistically significant.

The components of the clinical nutrition module in rank order are: Nutritional counseling and education to promote health across the life span; nutritional therapy and health maintenance; practical management strategies; and factors influencing dietary patterns/client compliance. As suggested by Kendall's coefficient concordance W, the average agreement on the clinical nutrition components was very high (W = 0.886) and chi-square (90.37, $p < 0.001$, df=3) was statistically significant.

The components of the nursing research module in rank order are: Practice applications of nursing research to promote health; foundations; biostatistics, major health promotion issues, and participation in research activities. As suggested by Kendall's coefficient of concordance W, the average agreement on the nursing

research components was strong (0.745) and chi-square (101.32, $p < 0.001$, df=4) was statistically significant.

The model masters program identification by the modified delphi technique is as follows.

Health Promotion and Wellness Model

Philosophy of Health Promotion
* Achieving an optimal level of health and well-being
* Fostering health awareness, personal growth and self-actualization

Family/Community Holistic Assessment & Health Promotion
* Biographic & demographic data
* Health risk & lifestyle appraisal across the life span
* Workplace, community & environmental assessment
* Growth & development
* Health history & physical exam
* Diagnostic/screening tests

Family/Community Health Maintenance Across the Life Span
* Global health & illness prevention
* Theories of biobehavioral mechanisms of health
  (e.g. stress response systems, developmental endocrinology)
* Epidemiology of infectious & chronic disease
* Common public health problems
* Workplace, community & environment change
* Maintenance of maximal function
* Promotion of physical, mental & social well-being
* Influencing Factors
  * self-responsibility
  * physical stamina/strength
  * intellectual capacities
  * stress control
  * systems theory
  * nutritional intake
  * environmental control
  * finance self-reliance
  * family dynamics

Family/Community Health Promotion and Wellness Strategies
* Health promotion/maintenance skills, services & support
  * individual & family counseling & evaluation
  * anticipatory guidance & partnerships
  * informational networking
  * knowledge/use of data bases
  * interdisciplinary team collaboration
  * clinical decision making

Family/Community Health Promotion and Wellness Outcomes
* Organizational enhancement
* Health Policy development
* Achieving an optimal level of health
  * global health & disease prevention

    * health care for the traditionally underserved populations
    * improvement of physical & social environment
    * physical, mental & social well-being
    * maximizing client's potential
    * dynamic state of health - homeostasis

  * Health Counseling & Education
    * Reshaping health seeking behaviors
    * Fostering awareness, growth & self-actualization

Primary Health Care Management

Basis for Identifying Management Interventions
  * Clinical decision making
  * Global health care needs
  * Achieving an optimal level of health
    * physical, mental and social well-being
    * dynamic state of health - homeostasis
    * improvement of physical and social environment
  * Fundamentals/focus of acute and chronic care
    * problem-solving approach
    * physical & biologic aspects of disease & conditions
    * physiology
    * incidence, etiology & risk factors
    * clinical manifestations
    * diagnostic interventions
    * physical assessment (related to health problem)
  * Evaluation of health outcomes

Community-Based Holistic Primary Health Care Management
  * Dynamics of holistic care
  * Health preventive services (e.g. immunizations)
  * Community-based health promotion counseling & education
  * Health risk appraisal and treatment referrals
  * Outpatient health-illness client management
  * Acute and chronic care management
    (e.g. medications and diet therapy)
  * Surveillance of health
    * knowledge/use of data bases
    * history and physical assessment
    * diagnostic/screening tests

Traditional Health and Healing Modalities
  * Therapeutic touch
  * Massage
  * Yoga
  * Self-help
  * Acupuncture

Clinical Practicum

Primary Health Care Management Opportunities
- Client Evaluation
  - Physical & nutritional assessment across the life span
    - medical & dietary history
    - lab studies
    - assessment techniques
    - body measurements
    - clinical signs of nutritional status & level of wellness
    - intergenerational, cycles
- Health Risk & Lifestyle Appraisal
  (e.g. race, genetic, age related, & personal habits)
- Clinical Decision Making
  - Diagnostic/screening interventions
  - Health promotion skills, services & support
  - Acute & chronic care management/treatment
  - Treatment referrals

Clinical Education Strategies for Health Promotion
- Internship Model or Post-Graduate Supervised Experience
  - minimum 1000-3500 clinical practice hours
- Interdisciplinary Education (preparation for team practice)
- Wellness Model
- Acute & Chronic Care Management/Treatment
- Enhancement of Professional Competence
  (e.g. research newsletters & self-study)

Educational Outcomes
- Provider/Manager of Primary Health Care
  - Health promotion skills, services & support
  - Disease preventive services
  - Early diagnosis of disease/disability
  - Communication skills across the life span
  - Acute & chronic care management/treatment
  - Interdisciplinary Team Member
  - Ability to provide primary health care and promote the health/environment of individuals, families, & groups within community-based systems
  - Nurse advocate & activist

Role Opportunities
- International Clinical Rotations
- Community-Based Systems
  (e.g. hospitals, nursing homes, shopping centers, doctor's offices, home health & neighborhood health centers)

Pharmacology

Effects of Drugs & Foreign Compounds on Biological Systems

- * Basis of drug therapy
- * Uses & disadvantages of drugs
- * Mechanisms of action
- * Immunopharmacology
- * Hazardous wastes
- * Physiological effects
- * Biochemical effects
- * Adverse effects
- * Self-induced inputs/effects
- * Environmental effects

Pharmacologic Management to Promote Health

- * Health Promotion Skills, Services & Support
  - * Adult, child & health care of women - primary care
  - * Laboratory/diagnostic tools/tests
  - * Prescriptive/nonprescriptive medications
  - * Immunizations
- * Counseling & Education to reshape health seeking behaviors
  - * health risk awareness
  - * health care alternatives
  - * informed personal health care decision making

Pharmacology Issues

- * Experiences people have with drug Rx & iatrogenics
- * Behavioral aspects of taking/receiving drugs
- * Provider addictions & abuse
- * Overuse of medications
- * Rx as power over clients
- * Legal aspects

Advanced Nursing Leadership

Role Development

- * Historical aspects of role
- * Community role as a professional citizen
- * Caring as a moral ground for nursing
- * Issues
  - * credentialing
  - * marketing
  - * feminist issues for role development
  - * health care system politics/economics
  - * health policy, political action, legal & ethical
  - * change agent role across various delivery systems
- * Professional Role Development
  - * consultant - researcher teacher - clinician

Health Promotion Conceptual Framework

- * Taxonomies, diagnoses, interventions & health outcomes for the individual, family & community
- * Reshaping health seeking behaviors
- * Care of traditionally underserved populations
- * International nursing
- * Interdisciplinary team approach
- * Linkage between health, social, ethical, & legal issues

* Ethical decision making models
* Debates (e.g. nurse practice acts, use of life support)

Fiscal Management
* Financial marketing & budgeting
* Cost accounting, benefit & effectiveness
* Documentation requirements
* Computer skills for software applications
* Impact of financing policies on health care delivery (e.g. cost containment, quality & access to care)

Nursing Administration/Leadership
* Community health models, theories & principles
* Policy development
* Practice management
* Conflict manager/negotiator
* Program analysis, management & evaluation
* Grant writing (application of program planning & evaluation, principles of budget development & cost analysis)

Alternatives for Financing Health Promotion Prevention Services
* Bonds for rural communities to establish clinics and help pay for operations
* Nurses in philanthropy
* Use of volunteers
* Sources of financial support (e.g. community, county, state, federal or insurers)

Community-Based Health Education

Health Counseling & Education Framework
* Participant-oriented intergenerational focus
* Motivational program components to promote health
* Health promotion & risk behavioral theories & concepts
* Models of community-based health promotion/preventive care
* Health belief model (e.g. individual perceptions, modifying factors & likelihood of action)

Health Counseling & Education Program Strategies
* Community-based ways to share information
* Health promotion/preventive care program design for culturally/economically diverse populations
* Adult learning strategies
* Health counseling & education
* Communication skills & assertiveness training
* Client empowerment to engage in health behaviors
* Networking & inter/agency organization collaboration

* Action Plans
  * Client development, needs & assets assessment
  * Acquiring participant involvement
  * Facilitating interaction among participates
  * Goals, objectives & planning expected outcomes
  * Creating a participative learning climate
  * Developing teaching tools (handouts & audiovisuals)
  * Implementation

* Evaluation
  * Student responsibility for participating & evaluating the teaching/learning process
  * Health outcome interpretation, synthesis & evaluation

Health Counseling & Education Issues
* Economic, political & ethical
* Health needs and resources of community subpopulations
* Socioeconomic problems affecting health promotion

Health Risk Management Education
(e.g. identification, evaluation & correction of potential health & environmental risks that could lead to injury or illness)

International Health Care
* Role of nursing
* Networking
* Opportunities to study aboard
* International health policy, systems, administration, delivery, economics, and evaluation

Clinical Nutrition

Nutritional Counseling & Education to Promote Health Across the Life Span
* Health Promotion Skills, Services & Support
  * Intergenerational cycles
  * Nutritional/Emotional Health Assessment
  * Health Risk Awareness
    * developmental role of nutrition in disease prevention
    * nutritional deficits/excess
    * interaction of food use/abuse & stress - community
  * Reshaping health seeking behaviors
    * balanced nutrition
    * nutrition & food behavior
    * nutrition & exercise (components of fitness)
    * stress management
    * coping skills & strengths

Nutritional Therapy and Health Maintenance
* Nutrient metabolism
* Physiological basis of nutrition care

* Biochemical basis of nutrition care
* Pharmacology interaction with nutrition
* Informed Personal Health Care Decision Making
  * diet therapy
  * food/nutrient intake according to age requirements
  * vitamin/mineral supplementation

Practical Management Strategies
* Informational networking
* Treatment referrals
* Involvement of community agencies/resources to enhance health awareness and health promotion programs
* Geriatric nutritional & pharmacological management
* Health Care Alternatives

Factors Influencing Dietary Patterns/Client Compliance

* Physiological	* Socioeconomic status
* Environmental	* Peer groups
* Community norms	* Cultural
* Mental/emotional	* Lifestyle
* Personal preferences & values	* Religious

Nursing Research

Practice Applications of Nursing Research to Promote Health
* Utilization of applied research
  * critique/analysis of nursing theory & research
  * clinical application of research techniques/analysis
* Health promotion skills, service & support
  * counseling/education based upon research outcomes
  * reshaping health seeking behaviors
  * health risk awareness
  * health care alternatives
  * informed personal health care decision making
* Qualitative Research Investigation (e.g. client observation, interview & case study)

Foundations
* Research dimensions, tools & design
* Qualitative & participatory action research methods
* Data collection
* Statistical analysis & interpretation
* Research outcomes
* Presenting the research report

Biostatistics
* Statistical analysis & interpretation of data

Major Health Promotion Issues
* Nature & content
* Noteworthy paradigm solutions to promote health drawing on international experience and international colleagues

Participation in Research Activities
(e.g. readings & sharing research information -internationally)

Conclusions of the Study

The following conclusions resulted from the findings of the research:

1. There was high interest in the study by the participants as evidenced by the response rate. The delphi panel of health care professionals representing agencies in the United States and Canada demonstrated a strong interest in revising the nursing curriculum. This commitment was also evident in the amount of time and effort needed to participate in a three round questionnaire.

2. A masters in nursing program to prepare professional nurses as community-based primary health care practitioners should include: (a) Educational modules and components of health and wellness; primary health care management; clinical practicum; pharmacology; advanced nursing leadership; community-based health education; clinical nutrition, and nursing research. (b) An interdisciplinary global approach to family/community health promotion and primary health care management; a community-linked and service-based didactic and clinical education process, and a clinical internship model of 1000-3500 clock hours.

3. Health promotion and wellness, the top education module, should formulate the overall framework of a model masters degree program for the community-based primary health care nurse practitioner.

4. The statistical strength of the rank order indicates the strong consensus of the panel on what top ranked components were most critical to a model program and if necessary the bottom rank order components could be omitted.

Implications of the Study

Nurse educators need to be aware of the education modules and components necessary at the masters level to prepare professional nurses as primary health care nurse practitioners. The purposively selected panel of health care professionals have clearly identified an interdisciplinary global approach to family/community health promotion and disease prevention, community-based primary health care management, and a clinical practicum of 1000-3500 clock hours as being "of critical importance" to a model masters program.

The model masters program was also designed to include the necessary modules and components to prepare nurse practitioners with specialized knowledge and skills in pharmacology, advanced nursing leadership, community-based health education, clinical nutrition, and nursing research. Moreover, to develop the nurse practitioner's critical thinking and leadership skills the model program integrated the concepts of holistic health assessment, health maintenance across the life span, basis for identifying management interventions, community-based primary health care management, and health counseling and education.

The education modules and components of the model masters program identified through expert consensus are consistent with

the Review of Literature. Concepts considered to be of critical importance to the academic instruction and clinical practicum of community-based primary health care nurse practitioners included health promotion, disease prevention, advanced assessment skills, diagnostic capabilities, critical thinking, and leadership skills (de Tornyay, 1993; Friedman, 1992; Keane & Richmond, 1993; Kessenich, 1992; Koch & Maserang, 1994; Pender et al., 1992; Price et al., 1992).

A shift in the curriculum from the current structure of individual, illness-centered care to one of population, community-based interventions has also been recommended by the American Nurses' Association ("As Reform Nears," 1993; Koch & Maserang, 1994; Taylor et al., 1994).

The National Council for the Education of Health Professionals has suggested educators utilize a curriculum that emphasizes national/international health promotion and disease prevention, health assessment, community-based health education, epidemiology, biostatistics, environmental change, and financial alternatives (Pender et al., 1992).

Recommendations for Practice

Based on the review of literature and comments from the delphi panel, the following recommendations for practice are presented.

1. Nurse educators should develop graduate programs for professional nurses utilizing the education modules and components described in this study.

2. A family/community health promotion and wellness across the life span framework should be integrated throughout the curriculum.

3. Didactic instruction and clinical practicum should reflect an interdisciplinary approach to global health and illness prevention.

4. Community-based primary health care nurse practitioners require additional skills in acute/chronic care management and diagnostic interventions.

5. Nurse practitioners should be prepared at the masters level to provide primary health care services for the traditionally underserved populations in community-based settings.

6. To meet the primary health care needs of the medically underserved populations the curriculum should be community-linked and service-based. In addition, an internship or post-graduate supervised experience for the professional nurse should be 1000-3500 actual clinical hours in a variety of community-based and international settings.

7. Graduate nursing programs preparing professional nurses as community-based primary health care nurse practitioners must become an internationally-linked nursing community.

8. The education components ranked as "of minimal importance" by the panel could be offered as electives or continuing education units depending upon the student's academic achievements and clinical expertise.

9. Educators should develop collaboration agreements with the community to create a learning environment that will develop the nurse practitioner's clinical competentency to deliver primary health care.

Recommendations for Further Research

The following recommendations for further research are offered.

1. A similar study is needed to determine faculty development and retraining approaches used in the various graduate programs in order to prepare teachers to develop the necessary competencies for teaching in a reformed educational system.

2. A follow-up needs to be conducted to assess the availability of community centers to provide primary health care services and serve as clinical education sites.

3. A similar study is needed to establish who is best qualified to teach the education module of pharmacology and finance components (e.g. physician, pharmacist, financial planner from the community).

4. A study is needed to determine the feasibility of developing a core curriculum for medical students and professional nurses specializing in primary health care.

5. A similar study is needed to identify the teaching sequence of the education modules and components.

6. A study is needed to determine the teaching modalities that will best prepare the nurse practitioner to dispense primary health care services in a community-based setting.

Final Thoughts

It is clear that educators have reached a crossroad in the history of nursing. A restructured health care delivery system will demand parallel reform in nursing education. Thus, the question before the nursing profession is very simple: Which approach will best formulate the process of nursing education? Will educators continue to make the Tylerian approach uniformly applicable to all nursing curriculum? Or will nurse educators have the courage to blaze new trails and adopt a model masters degree program that empowers the nurse practitioner to delivery primary health care in a reformed health care system?

Failure to prepare professional nurses with the specialized knowledge and skills needed to function effectively in a restructured health care delivery system will jeopardize the nurse practitioner's role as a primary health care provider. Without the community-based primary health nurse practitioner national health care reform will be hampered, health care costs will continue to escalate, and the availability of health care services for the medically underserved populations will remain limited.

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APPENDIXES

APPENDIX A

PILOT STUDY COVER LETTER AND

RESPONSE ENCLOSURE

March 26, 1994

Dear

As policy makers reshape the nation's health care delivery system it is imperative for nurses to envision the future and re-examine the education process. Enactment of national health care reform affords nurses a chance of a lifetime for expanded roles and new practice privileges as community based primary care providers.

However, one of the concerns facing educators is the great disparity that exists between the curriculum design and level of academic preparation necessary to prepare the community based primary care nurse practitioner. The purpose of this research project is to identify a model masters degree program in nursing (MSN) to prepare professional nurses as primary care nurse practitioners in community based settings.

It is my belief that a model masters program to prepare primary care nurse practitioners would benefit schools of nursing to: 1) envision graduate programming in a new light; 2) facilitate educational reform, and 3) meet societal health care expectations.

Because of your leadership and expertise, I am inviting you to participate in a pilot study of the cover letter and questionnaire that will be directed to health care professionals across the nation. Please be assured that confidentiality of individual responses will be maintained.

Upon your acceptance to participate in the pilot study:

1. I will send a copy of the cover letter and questionnaire to you requesting your comments and input.

2. You will examine the cover letter and questionnaire to detect problems with the clarify of instructions, detail, and length.

3. You will also determine completion time of the questionnaire by indicating the importance of each education module.

March 26, 1994

Please take a minute to complete the enclosure indicating your willingness to participate in the pilot study and return the enclosure in the provided self-addressed and stamped envelope. Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing for the community based primary care nurse practitioner. I am looking forward to the possibility of working with you on this project. All participants will receive details of the findings of the study. Thank you for your consideration.

I know that spring can be very hectic, therefore, it is my plan to move through this process as quickly as possible. Your assistance in marking and returning the enclosure by April 9, 1994 is greatly appreciated.

Sincerely,

Julie K. Putnam, Ed.S., R.N.
R.R. #2 Box 23
Carbondale, Kansas 66414
(O) (913) 273-7140
(H) (913) 836-2323

Enclosures

IDENTIFICATION OF A MODEL MASTERS DEGREE IN NURSING

FOR THE COMMUNITY-BASED PRIMARY CARE NURSE PRACTITIONER

PILOT STUDY

* Please feel free to make any corrections to the current information provided below:

*NAME: _____

*TITLE: _____

*ADDRESS: _____

_____

_____

_____ Yes, I will participate in the pilot study.

_____ No, I will not be able to participate in the pilot study.

_____ _____

Date Signature

APPENDIX B

REVISED PILOT STUDY AND THREE ROUND QUESTIONNAIRE COVER LETTER

KAW Area
Technical School

5724 SW Huntoon St
Topeka. KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

March 29, 1994

Dear

I am a practical nursing instructor at Kaw Area Technical School and a doctoral candidate at Oklahoma State University. As a strong advocate for health care reform I have selected the identification of a model masters degree program (MSN) for the primary care nurse practitioner for my research project.

Because of your leadership and expertise, I am inviting you to participate in a pilot study of the cover letter and questionnaire that will be directed to health care professionals across the nation. Participation in the pilot study involves critiquing a cover letter and indicating your opinion on the importance of each proposed education module. Completion time of the pilot study is estimated at 10-15 minutes. Please be assured that confidentiality of individual responses will be maintained.

Please take a minute to complete the enclosure indicating your willingness to participate in the pilot study and return the enclosure in the provided self-addressed and stamped envelope. Your assistance in marking and returning the enclosure by April 26, is greatly appreciated.

Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing for the community-based primary care nurse practitioner. I am looking forward to the possibility of working with you on this project. All participants will receive details of the findings of the study. Thank you for your consideration.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

May 1, 1994

Dear

I am a practical nursing instructor at Kaw Area Technical School and doctoral candidate at Oklahoma State University. As a strong advocate for health care reform I have selected the identification of a model masters degree program (MSN) for the primary health care nurse practitioner for my research project.

Because of your leadership and expertise, I am inviting you to participate in a three round questionnaire that will be directed to a panel of 20 health care professionals across the nation. Participation in this research project requires each health care expert to indicate their opinion on the importance of the proposed educational modules on three separate occasions in order to reach a group consensus. Completion time for each questionnaire is estimated at 10 minutes thus the entire project should require approximately 30 minutes. Please be assured that confidentiality of individual responses will be maintained.

Please take a minute to complete the enclosure indicating your willingness to participate in the three round questionnaire and return the enclosure in the provided self-addressed and stamped envelope. Your assistance in marking and returning the enclosure in a prompt manner is greatly appreciated.

Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing for the community based primary health care nurse practitioner. I am looking forward to the possibility of working with you on this project. All participants will receive details of the findings of the study. Thank you for your consideration.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

APPENDIX C

CORRESPONDENCE FOR THE PILOT STUDY

April 25, 1994

Dear

Thank you for agreeing to participate in a pilot study on the identification of a model masters degree in nursing for the community-based primary health care nurse practitioner. Your input in this pilot study is critical to achieve a shared vision for a primary care health nurse practitioner graduate program. I would like to receive your recommendations on the cover letter and questionnaire booklet that will be sent to health care colleagues across the nation.

1. Is the cover letter one you would answer? Please circle a response. If the answer is no, your comments would be appreciated.

   Yes No

   Comments: _____

   _____

   _____

   _____

2. Is the first round questionnaire TOO DETAILED? Please circle a response. If yes, your comments would be appreciated.

   Yes No

   Comments: _____

   _____

   _____

3. Is the questionnaire booklet too long? Please circle a response. If yes, your comments would be appreciated.

   Yes No

   Comments: _____

   _____

4. Please indicate the degree of importance for each education module identified in the questionnaire booklet, feel free to record any additions or comments under the "Recommendation Section".

5. How long did it take you to complete the questionnaire?

   _____ minutes

6. Please indicate any individuals you would recommend for the three round questionnaire:

   Name/Title: _____

   Address: _____

   _____

   _____

   Name/Title: _____

   Address: _____

   _____

   _____

After you have completed the pilot study, please place this letter in the questionnaire booklet and secure both the letter and booklet with a staple. A quick response is greatly appreciated. To expedite the mailing process I have self-addressed and stamped the back of the questionnaire booklet. Thank you for your participation.

Sincerely,

Julie Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi

PROPOSED COVER LETTER TO BE SUBMITTED TO
PRESIDENT CLINTON'S TASK FORCE

Dear

As policy makers reshape the nation's health care delivery system it is imperative for health care professionals to envision the future and re-examine the education process. Enactment of national health care reform affords nurses a chance of a lifetime for expanded roles and new practice privileges as community based primary care providers.

However, one of the concerns facing educators is the great disparity that exists on the curriculum design and level of academic preparation necessary to prepare the community based primary care nurse practitioner. The purpose of this research project is to identify a model masters degree program in nursing (MSN) to prepare professional nurses as community based primary care nurse practitioners.

This study understands that the primary care nurse practitioner will work in a community based setting and deliver health-oriented services such as physical exams, immunizations, prescription authorizations, and treatment of minor illnesses. The nurse practitioner's role will likewise include the delivery of basic health education, preventive services, surveillance and management of problems in health maintenance, and appropriate treatment referrals.

Because of the leadership and expertise found in President Clinton's Health Care Task Force, I am inviting you and your colleagues throughout the United States to achieve a shared vision for a primary care nurse practitioner graduate program. It is my belief that a model masters program to prepare primary care nurse practitioners would benefit schools of nursing to: 1) envision graduate programming in a new light; 2) facilitate educational reform, and 3) meet societal health care expectations.

To develop a model masters program this research project will utilize a three round questionnaire, each being as brief as possible, to arrive at a group consensus on the education modules necessary to prepare professional nurses as community based primary care nurse practitioners. Please be assured that confidentiality of individual responses will be maintained.

Upon your acceptance to participate in this research study:

1. Round I: I will send the first questionnaire booklet providing you an opportunity to indicate your opinion on the degree of importance of the proposed education modules. After all questionnaires from the panel have been tabulated, the results of Round I and a revised questionnaire booklet will be sent.

2. Round II: The revised questionnaire will invite you to review the statistical analysis from the first questionnaire, indicate the degree of importance of each proposed education module, and as applicable specify reasons for remaining outside the group's consensus. After all questionnaire booklets from the panel have been tabulated, the results of Round II and a revised questionnaire booklet will be sent.

3. Round III: The final questionnaire will invite you to review the statistical analysis from Round II and elicit your concurrences or differences with the group consensus on the importance of the proposed education modules.

Please take a minute to complete the enclosure indicating your willingness to participate in the research project and return the enclosure in the provided self-addressed and stamped envelope. Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing for the community based primary care nurse practitioner. I am looking forward to the possibility of working with you on this project. All participants will receive details of the research findings. Thank you for your consideration.

I know that spring can be a very hectic time of year, therefore, it is my plan to move through this process as quickly as possible. Your assistance in marking and returning the enclosure by April 15, 1994 is greatly appreciated.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
R.R. #2 Box 23
Carbondale, Kansas 66414-8916
(O) (913) 273-7140
(H) (913) 836-2323
Enclosure

APPENDIX D

PILOT STUDY PARTICIPANTS

N = 32

Nursing Deans:
Azusa Pacific University - Azusa, CA
Hampton University, Hampton, VA
SUNY at Buffalo - Buffalo, NY
Oregon Health Sciences University - Portland, OR
University of Delaware - Newark, DE
University of Northern Colorado - Greeley, CO
University of Texas - Houston, TX
University of Virginia - Charlottesville, VA
University of Wisconsin - Eau Claire, WI

Nursing Professors:
Ball State University - Muncie, IN
University of Washington - Seattle, WA

Nursing Instructor:
Kaw Area Techical School - Topeka, KS

Primary Health Care Nurse Practitioners:
Hays, KS
Division Head Preventive Clinical Services - Kansas City, KS
Leavenworth, KS

Physician's Office Nurse:
Topeka, KS

Public Health Nurse:
Shawnee County Public Health Clinic - Topeka, KS

Colmery O'Neil Veterans Medical Center - Topeka, KS
Associate Chief Nursing Education
Nurse Recruiter/Educator
Nurse Manager - Medical Unit
Supervisor - Long Term Care Unit
Physician Assistant
Clinical Nurse Specialist (2)
Nurse Practitioner
Long Term Care Staff Nurses (2)
Medical Staff Nurses (3)
Quality Improvement Nurse

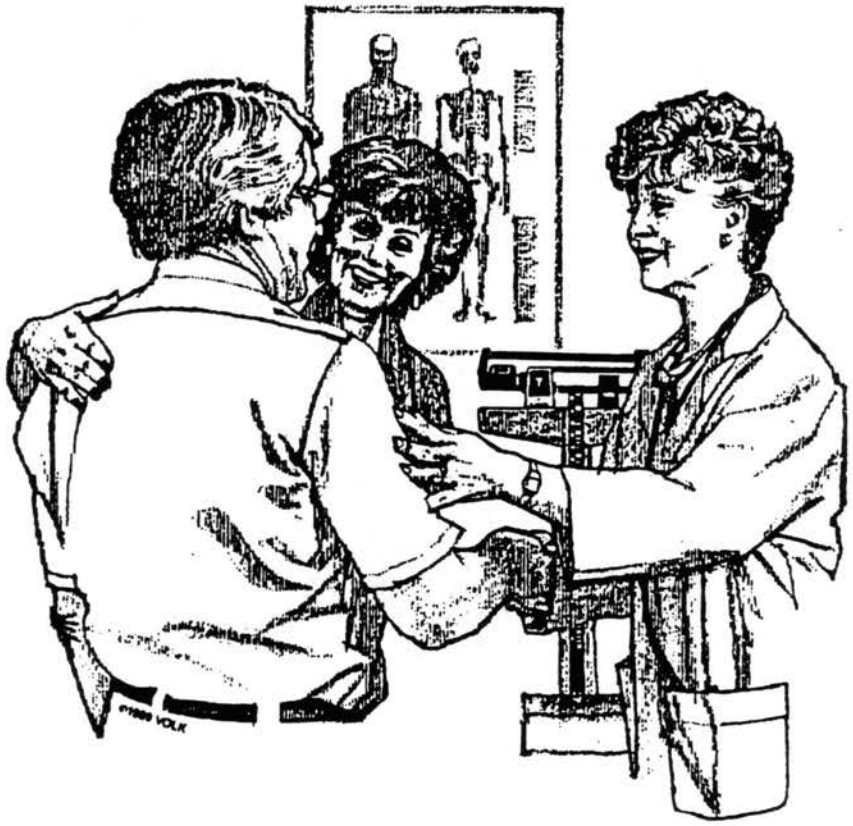
Stormont-Vail Regional Medical Center - Topeka, KS
Emergency Dept Nurse/Educator/QA Coordinator

APPENDIX E

PILOT STUDY QUESTIONNAIRE

Envision New Horizons

Pilot Study



Julie K. Putnam, RN, EdS
R.R. #2 Box 23
Carbondale, KS 66414
(O) (913) 273-7140
(H) (913) 836-2323

March 1994

Dear Colleague:

Thank you for accepting my invitation to envision a model masters degree program for the community based primary health care nurse practitioner. The response has been excellent confirming the need for and interest in the development of a model program.

As you indicate the degree of importance for each proposed module, feel free to record any additions or comments under the "Recommendation Section" of the questionnaire booklet. Upon completion of the questionnaire, please secure the booklet with a staple and return by _____, 1994. To expedite the mailing process I have self-addressed and stamped the back of the questionnaire booklet.

After all questionnaires from the panel have been received and tabulated, a revised questionnaire booklet will be sent. The revised questionnaire for Round II will invite you to rank-order each proposed education module and component.

Thank you for your participation. Your effort to answer and return this first round questionnaire in a timely manner is greatly appreciated.

Sincerely,

DIRECTIONS: Please circle the number corresponding to your opinion of the importance of the proposed education module.

1 - no importance
2 - little importance
3 - some importance
4 - much importance
5 - critical importance

PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
PHARMACOLOGY					
Basis of drug therapy	1	2	3	4	5
Physiological effects of drugs & foreign compounds on biological systems	1	2	3	4	5
Biochemical effects of drugs & foreign compounds on biological systems	1	2	3	4	5
Mechanisms responsible for therapeutic & toxic effects	1	2	3	4	5
Uses & disadvantages of drugs	1	2	3	4	5
Immunopharmacology.	1	2	3	4	5

RECOMMENDATIONS: _____

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BIOSTATISTICS	1	2	3	4	5
Research Design	1	2	3	4	5
Statistical Skills & Analysis	1	2	3	4	5

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
NUTRITION					
Clinical Nutrition.	1	2	3	4	5
Nutrition in disease including physiological & biochemical basis of nutrition care	1	2	3	4	5
Effects of disease on nutrient metabolism.	1	2	3	4	5
Diet therapy.	1	2	3	4	5
Nutrition assessment.	1	2	3	4	5
Nutrition counseling.	1	2	3	4	5
Nutrition and Food Behavior	1	2	3	4	5
Physiological, environmental cultural, & economic factors influencing the use of food . . .	1	2	3	4	5
Food behavior modification programs.	1	2	3	4	5
Nutrition and Exercise.	1	2	3	4	5
Community Nutrition	1	2	3	4	5
Community factors influencing nutritional status.	1	2	3	4	5
Community needs assessment. . . .	1	2	3	4	5
Community nutrition programs. . .	1	2	3	4	5

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
HEALTH PROMOTION AND WELLNESS					
Epidemiology	1	2	3	4	5
Common Public Health Problems. . . . (amenable to screening, early diagnosis, & intervention)	1	2	3	4	5
Disease Management	1	2	3	4	5
Holistic Health Maintenance. . . . . (measures to prevent illness, maintain maximal function, & promote physical, mental, & social well-being)	1	2	3	4	5
Health Risk Appraisal	1	2	3	4	5
Occupational	1	2	3	4	5
Community & Environment	1	2	3	4	5
Individual/Family.	1	2	3	4	5
Health Risk Screening.	1	2	3	4	5
History/physical assessment. . .	1	2	3	4	5
Interpreting diagnostic tests. .	1	2	3	4	5
Health Risk Prevention Measures. . .	1	2	3	4	5
Lifestyle/health counseling. . .	1	2	3	4	5
Health education	1	2	3	4	5
Treatment referrals.	1	2	3	4	5
Behavioral Theories & Concepts . . .	1	2	3	4	5
Biobehavioral Mechanisms of Health .	1	2	3	4	5
Family Systems Theory.	1	2	3	4	5
Models of Community Based Promotive and Preventive Care.	1	2	3	4	5

RECOMMENDATIONS: _____

PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
ADVANCED ROLE DEVELOPMENT					
Ethical Decision Making Models. . . .	1	2	3	4	5
Professional Leadership	1	2	3	4	5
Models of Planned Change.	1	2	3	4	5
Health Care Policy Issues	1	2	3	4	5
Computer Technology	1	2	3	4	5
Managed Care.	1	2	3	4	5
Issues.	1	2	3	4	5
Strategies.	1	2	3	4	5
Clinical decision making.	1	2	3	4	5
Health outcomes	1	2	3	4	5

RECOMMENDATIONS: _____

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HEALTH EDUCATION PROGRAM PLANNING					
Community Needs Assessment.	1	2	3	4	5
Community Based Program Design. . . .	1	2	3	4	5
Culturally diverse populace . . .	1	2	3	4	5
Economically diverse populace . .	1	2	3	4	5
Outcome Evaluation.	1	2	3	4	5
Economic, Political, & Ethical Issues	1	2	3	4	5

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
FISCAL MANAGEMENT					
Cost Accounting	1	2	3	4	5
Budgeting	1	2	3	4	5
Cost Benefit & Effectiveness.	1	2	3	4	5
Ethical and Legal Issues.	1	2	3	4	5
Finance Alternatives.	1	2	3	4	5

RECOMMENDATIONS: _____

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CLINICAL PRACTICUM CONCEPTS					
Primary Health Care	1	2	3	4	5
Health Promotion.	1	2	3	4	5
Health Maintenance.	1	2	3	4	5
Disease Prevention Activities	1	2	3	4	5
Health Illness Client Management. . .	1	2	3	4	5
CLINICAL PRACTICUM SETTINGS					
Community Based Health Centers. . . .	1	2	3	4	5
School.	1	2	3	4	5
Work place (industry & business)	1	2	3	4	5
Rural community	1	2	3	4	5
Economically depressed areas. . .	1	2	3	4	5
Acute Care Facilities	1	2	3	4	5

RECOMMENDATIONS: _____

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_____

APPENDIX F

PILOT STUDY MASTER SHEET

PILOT STUDY MASTER SHEET
Panel Recommendations

PHARMACOLOGY MODULE

1. Additions:
   a. Establish a new component entitled "Pharmacologic management".

   b. The course content of the "Pharmacologic management" component should include: basis of drug therapy; uses and disadvantages of drugs; behavioral aspects of taking and receiving drugs; and strategies with and without prescriptive authority.

2. Revisions:
   a. Identify physiological and biochemical effects under one component entitled "Effects of drugs and foreign compounds on biological systems".

3. Recommendations:
   a. A strong base in pharmacology is essential to the nurse practitioner.

BIOSTATISTICS MODULE

1. Additions:
   a. Establish a new component entitled "Foundations". The course content of the "Foundations" component should include: 1) research dimensions, tools, and design; 2) data collection; 3) statistical analysis and interpretation; 4) critique/analysis of nursing theory and research, and 5) presenting the research report.

   b. Identify biostatistics as an education component.

   c. Create a three component for the module entitled: "Major discipline questions". The component should present the nature, content, and noteworthy paradigm solutions.

2. Revisions:
   a. Change the name of the biostatistics module to nursing research.

3. Recommendations:
   a. A basic statistical knowledge is a plus.

   b. Increased knowledge in nursing research is essential for managing programs.

c. Research and available statistics are important to the primary health care nurse practitioner working in a community-based setting.

CLINICAL NUTRITION MODULE

1. Revisions:
   a. Delete the component entitled "Clinical nutrition".

   a. Revise the "Nutrition in disease" component to include disease effects on nutrient metabolism; physiological basis of nutrition care, and biochemical basis of nutrition care.

   b. Revise the "Nutrition and food behavior" and "Community nutrition" components to include physiological, environmental, cultural, and economic factors.

2. Recommendations:
   a. Consolidate the components for the clinical nutrition module from 14 to seven to enhance the proposed module.

   b. Nutritional knowledge to change long time habits is helpful; client compliance has been problematical. Increase in adult learning techniques probably would be helpful.

HEALTH PROMOTION AND WELLNESS MODULE

1. Additions:
   a. Add components entitled "Health assessment", "Health promotion programs", and "Community health goal strategies".

1. Revisions:
   a. Change models of community-based promotive and preventive care to models of community-based health promotion and preventive care.

   b. Identify the "Disease management" component as an independent education module.

   c. The "Health assessment" component should present concepts in biographic and demographic data, health risk appraisal, growth and development, health history, physical assessment, and screening tests.

   d. Course content for the "Health promotion programs" should include: evaluation/screening, education and motivation behavioral change (participatory), organizational enhancement, immunizations, and counseling.

e. The component entitled "Community health goal strategies" should afford the nurse practitioner experience in networking, collaboration, and team approaches to promote health.

ADVANCED ROLE DEVELOPMENT MODULE

1. Additions:
   a. Create a new component entitled "Conceptual framework". The course content should include: ethical decision making models, professional leadership, community role as a profession citizen, interdisciplinary team approaches to community health goals, and debates

2. Revisions:
   a. Move "Managed care" component to the newly created module entitled "Disease management".

   b. Change the name of the component entitled "Health care policy issues" to "Linkage between health and social issues".

   c. Change the name of the "Computer technology" component to "Informational computer networking".

   d. Move the "Computer technology" component to the "Managed care" component of the Management of Health Problem Module. Design the component to include computer link ups with county and state projects, programs, and resources.

MANAGEMENT OF HEALTH PROBLEMS MODULE

1. Additions:
   a. Create a new component entitled "Conceptual framework". Concepts presented in this component enhance the nurse practitioner's knowledge in incidence, etiology, risk factors, pathophysiology, clinical manifestations, and diagnostic assessment of illness.

   b. Add a component entitled "Managed care" and include the following concepts: issues, team approach to health care, informational computer networking, clinical decision making, treatment referrals, strategies, and evaluation of health outcomes.

   c. Develop a new education module entitled "management of health problems".

HEALTH EDUCATION PROGRAM PLANNING MODULE

1. Revisions:
   a. Change the name of the module from "Health education program planning" to "Community-based health education".

   b. The module should be constructed to include the components of "Principles of teaching and learning"; "Risk management education"; "Health belief model"; "Economic, political, and ethical issues", and "Program design".

   c. Change "Program design" to include needs assessment, planning, and implementation.

2. Recommendations:
   a. A model program should emphasize the community, adult learning techniques, and health promotion.

FISCAL MANAGEMENT MODULE

1. Additions:
   a. Documentation requirements

   b. Identification of options for financial support (e.g. monies from community, county, state, federal or insurers)

2. Recommendations:
   a. Financial management is a must for the community-based primary health care nurse practitioner.

   b. Identification of financial resources is essential.

CLINICAL PRACTICUM CONCEPTS MODULE

1. Additions:
   * Outpatient clinics of acute care hospitals

2. Revisions:
   a. Rename the module from "Clinical practicum concepts" to "Clinical practicum sites".

   b. Include the clinical practicum settings community-based health centers and acute care facilities under the "Clinical practicum sites" module.

3. Recommendations:
   a. The settings identified in the instrument are viable and differ by student goals or by the individual school mission.

CLINICAL PRACTICUM SKILLS MODULE

1. Additions:
   a. Create a new module entitled "Clinical practicum skills".

   b. Components of the module should include "Individual practitioner skills" and "Working with communities".

   c. The "Individual practitioner skills" should include health promotion and maintenance, disease prevention, early diagnosis of disease/disability, and health-illness client management.

GENERAL RECOMMENDATIONS:

1. Place more emphasis on the community setting, disease prevention, behavioral assessment, and treatment referral.

2. Add interdisciplinary teams and networking to the curriculum.

3. Change the term "primary care" to "primary health care".

APPENDIX G

REQUESTS FOR MAILING LISTS FROM KANSAS, MISSOURI, AND OKLAHOMA STATE BOARDS OF NURSING

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

March 29, 1994

Janette Pucci, R.N., M.S.N.
Educational Specialist
Kansas State Board of Nursing
Landon State Office Building
900 S.W. Jackson, Suite 551-S
Topeka, KS 66612-1230

Dear Ms Pucci:

I am a practical nursing instructor at Kaw Area Technical School in Topeka, Kansas and a doctoral candidate at Oklahoma State University in Stillwater, Oklahoma. As a strong advocate of national health care reform I have selected the identification of a model masters degree program (MSN) for the community based primary care nurse practitioner for my doctoral dissertation.

To develop a model masters program this research project will invite a purposively selected panel of 20 health care professionals across the nation to respond to a three round questionnaire. Moreover, the panel of health care professionals will include physicians, nurse educators, and nurse practitioners. To facilitate the purposively selection of the panel members, I would like to request a mailing list of the advanced registered nurse practitioners licensed in Kansas.

For your review, I am enclosing a copy of a mini-research proposal and IRB approval from Oklahoma State University. Please advise me if the Board of Nursing requires any additional information. I look forward to hearing from you.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

MINI-RESEARCH PROPOSAL

I. NATURE OF THE PROBLEM

In response to societal demands for a restructured delivery system, President Clinton's health plan affords individuals the right to health and universal access to affordable care. Specifically, the Clinton administration's health care reform redirects the delivery of primary health care services from physicians to nurse practitioners in community-based settings ("AMA Thinks Twice," 1993; "AMA to Study," 1993).

But reshaping the Nation's health care delivery system also requires parallel education reform (Watson & Phillips, 1992). Professional nurses preparing for advanced clinical practice in community-based settings as nurse practitioners require graduate programming that differs from what exists in nursing today (Kenyon, Smith, Hefty, Bell, McNeil, & Martaus, 1990).

The problem can be stated thus: a shared vision does not yet exist to prepare professional nurses to be primary health care nurse practitioners in community-based settings.

II. PURPOSE OF THE RESEARCH

The purpose of the study is to identify through expert consensus a model masters degree program in nursing (MSN) to prepare professional nurses as primary health care nurse practitioners to work in community-based settings.

III. REVIEW OF LITERATURE

The review will consist of: 1) practical and theoretical reasoning and 2) similar studies that directly and indirectly relate to the literature. Moreover, proposed sources of information are readily available and will include a variety of current as well as older resources (e.g. periodicals, books, government documents). Data sources will be secured utilizing an electronic search (e.g. ERIC, PETE, Dissertation Abstracts, Dialog Information Services, and Med-Search.

The Review of Literature Section Titles will include: 1) The American Health Care System 2) Nursing Education; 3) Model Masters Degree Program, and 4) Summary.

IV. RESEARCH QUESTION

What education modules are necessary at the masters level to prepare professional nurses as primary health care nurse practitioners to work in community-based settings.

V. METHODOLOGY OF RESEARCH

A three round modified Delphi Technique will be employed as outlined below:

Stage One: Based upon the review of literature develop a list of proposed education modules that are necessary to prepare professional nurses as primary health care nurse practitioners to work in community-based settings.

Stage Two: Formulate a questionnaire based on the proposed education modules identified in stage one. A five point weighting scale will be utilized to assess the degree of importance for each proposed education module.

Stage Three: Pilot the questionnaire using a sample of 30 nurse educators and health care professionals across the nation. Members of the pilot study will evaluate the clarity and degree of importance of the proposed education modules, determine completion time, and provide suggestions. Recommendations from the pilot sample will be incorporated into the questionnaire for Round I of the modified delphi.

Stage Four: A panel of at least 20 health care experts will be purposively selected to critique the proposed education modules. Expert selection will focus on individuals across the nation with a high level of expertise on nursing education, national health care reform, and primary health care.

Stage Five: A questionnaire is mailed to the members of the panel who remain anonymous to one another. On the first round, each expert receives a copy of the proposed education modules and will be invited to: 1) make any additions as indicated and 2) indicate the degree of importance for each proposed education module using a five point weighting scale. After all questionnaires from the panel have been tabulated, a revised questionnaire booklet will be sent.

Stage Six: A revised questionnaire is mailed to the members of the panel. This questionnaire invites the panel to rank order the degree of importance of each proposed education module. After all questionnaires booklets from the panel have been tabulated a revised questionnaire booklet will be sent.

Stage Seven: The final questionnaire invites the panel to review the rank order determination from Round II and elicits the participate's concurrence or differences with the group consensus.

Stage Eight: Based upon the analysis of the panel responses descriptive statistics will be calculated and rank order determined. True rankings will be determined by a statistical procedure utilizing Kendall's Coefficient of Concordance W.

TIME SCHEUDLE:

1.	Topic Identification	Fall	1993
2.	Preliminary Investigation of the Review of Literature	Fall	1993
3.	Writing and Approval of the Research Proposal	Spring	1994
4.	Preliminary Outline Drafted	Spring	1994
5.	Completion of Rough Draft	Fall	1994
6.	Final Draft	Fall	1994

VI. COST OF THE RESEARCH

This research will be privately funded by the researcher and it is estimated to cost approximately $500.00. The proposed budget will include telephone, fax, copying, and postage expense.

REQUEST FOR RECORD INSPECTION/COPY OF NAMES AND/OR ADDRESSES

(To be Completed by Requestor)

NAME: Julie K. Putnam, R.N., Ed.S.

Address: R.R. #2 Box 23 **Street**
Carbondale, KS 66414-8916 **City, State,Zip**

RECORD SOUGHT: ARNP - Mailing List - Primary Care Nurse Practitioner

INTENDED PURPOSE: Doctoral Dissertation: The identification of a model masters degree program (MSN) for the community based primary care nurse practitioner

CERTIFICATE OF COMPLIANCE WITH K.S.A. 21-3914

I, Julie K. Putnam, **understand that no person shall receive, for the purpose of selling or offering for sale any property or service to person listed therein, any list of names or addresses contained in or derived from a public record, except that a list of names and addresses of licensees of the Board may be received by a professional organization for membership, informational, or other purposes related to the practice of the profession, and a list of names and addresses of persons applying for license examination may be received by professional organizations providing educational materials for the purpose of providing persons with information relating to the availability of such materials.**

I also understand that violation of the statute prohibiting the unlawful use of names derived from a public record is a Class C misdemeanor.

In accordance with these provisions, I certify that I do not intend to, and I will not, use any list of names or addresses contained in or derived from the record for the purpose of selling or offering for sale any property or service to any person listed or to any person who resides at any address listed; neither will sell, give, or otherwise make available to any person any list of names or addresses contained in or derived from the records or information for the purpose of allowing that person to sell or offer for sale any property or service to any person listed or to any person who resides at any address listed, except under authority of the limited circumstances provided in K.S.A. 21-3914 and amendments thereto.

Julie K Putnam R.N., Ed.S.
Signature

Julie K. Putnam, R.N., Ed.S.
Please Print or Type Name

Sworn and subscribed to before me, a Notary Public, on the 6th **day of** April, **19** 96.

Carol J. Freking
Notary Public

CAROL J. FREKING
NOTARY PUBLIC
STATE OF KANSAS
MY APPT EXPIRES 11-25-96

My Commission Expires: 11/25/96

Kansas State Board of Nursing

Landon State Office Building
900 S.W. Jackson, Rm. 551
Topeka, Kansas 66612-1230
913-296-4929
FAX 913-296-3929

Patsy L. Johnson, R.N., M.N.
Executive Administrator
913-296-5752

MEMORANDUM

TO: Julie K. Putnam, R.N., Ed.S.

FROM: Janette Pucci, M.S.N., R.N.
Education Specialist

DATE: April 12, 1994

Due to illness, our Computer Operator has been out of the office the past two days. Your request for the ARNP list be honored as soon as he returns to the office. If you have any questions please contact me.

KAW Area
Technical School

5724 SW Huntoon St
Topeka. KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

April 7, 1994

Division of Professional Registration
P.O. Box 1335
Jefferson City, Missouri 65102

Dear Colleague:

I am a practical nursing instructor at Kaw Area Technical School in Topeka, Kansas and a doctoral candidate at Oklahoma State University in Stillwater, Oklahoma. As a strong advocate of national health care reform I have selected the identification of a model masters degree program (MSN) for the community based primary care nurse practitioner for my doctoral dissertation.

To develop a model masters program this research project will invite a purposively selected panel of 20 health care professionals across the nation to respond to a three round questionnaire. Moreover, the panel of health care professionals will include physicians, nurse educators, and primary care nurse practitioners. To facilitate the purposively selection of the panel members, I would like to request a mailing list of primary care nurse practitioners licensed in Missouri.

For your review, I am enclosing a copy of a mini-research proposal and IRB approval from Oklahoma State University. Please advise me if the Division of Professional Registration requires any additional information. I look forward to hearing from you.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

MISSOURI DEPARTMENT OF HEALTH

Mel Carnahan
Governor

Coleen Kivlahan, M.D., M.S.P.H.
Director

P.O. Box 570, Jefferson City, MO 65102-0570 • 314-751-6400 • FAX 314-751-6010

April 14, 1994

Julie K Putnam, R.N., Ed.S.
R. R. #2 Box 23
Carbondale, Kansas 66414-8916

Dear Ms. Putnam:

Your letter of April 7, 1994 to Professional Registration requesting a mailing list of nurse practitioners has been referred to us for processing.

There are 576 RN nurse practitioners in Missouri based on the 1993 RN survey data.

A mailing list costs $27.50, mailing labels with a listing cost $47.50.

Please mail your check and request to:

Missouri Department of Health
Bureau of Health Resources Statistics
Attn: Mary Jane King
PO Box 570
Jefferson City MO 65102

If you with further information please contact me at 314/751-6279.

Sincerely,

Mary Jane King, Analyst
Division of Health Resources
Bureau of Health Resources Statistics

kf

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

April 7, 1994

Oklahoma Board of Nursing Registration and Nursing Education
2915 North Classen Blvd., Suite 514
Oklahoma City, Oklahoma 73106

Dear Colleague:

I am a practical nursing instructor at Kaw Area Technical School in Topeka, Kansas and a doctoral candidate at Oklahoma State University in Stillwater, Oklahoma. As a strong advocate of national health care reform I have selected the identification of a model masters degree program (MSN) for the community based primary care nurse practitioner for my doctoral dissertation.

To develop a model masters program this research project will invite a purposively selected panel of 20 health care professionals across the nation to respond to a three round questionnaire. Moreover, the panel of health care professionals will include physicians, nurse educators, and primary care nurse practitioners. To facilitate the purposively selection of the panel members, I would like to request a mailing list of primary care nurse practitioners licensed in Oklahoma.

For your review, I am enclosing a copy of a mini-research proposal and IRB approval from Oklahoma State University. Please advise me if the Oklahoma Board of Nursing Registration and Nursing Education requires any additional information. I look forward to hearing from you.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

APRIL 14, 1994

THIS IS TO NOTIFY YOU THAT WE ARE UNABLE TO LOCATE ANYONE WHO IS RECOGNIZED TO PRACTICE IN THE STATE OF OKLAHOMA AS A PRIMARY CARE NURSE PRACTITIONER. HOWEVER, WE DO HAVE A SPECIALTY OF FAMILY NURSE PRACTITIONER (68).

THE COST TO PROVIDE THE LIST IF $41.00.

IF YOU WOULD LIKE US TO PROVIDE YOU WITH THE ABOVE MENTIONED LIST, SEND THE $41.00 WITH THIS LETTER.

IF YOU HAVE ANY QUESTIONS, CONTACT THIS OFFICE (405/525-2076).

THANK YOU.
MARY ANN THOMASON

APPENDIX H

CORRESPONDENCE AND RESPONSE ENCLOSURE TO PURPOSIVELY SELECT A DELPHI PANEL OF HEALTH CARE EXPERTS

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

May 1, 1994

Dear

I am a practical nursing instructor at Kaw Area Technical School and doctoral candidate at Oklahoma State University. As a strong advocate for health care reform I have selected the identification of a model masters degree program (MSN) for the primary health care nurse practitioner for my research project.

Because of your leadership and expertise, I am inviting you to participate in a three round questionnaire that will be directed to a panel of 20 health care professionals across the nation. Participation in this research project requires each health care expert to indicate their opinion on the importance of the proposed educational modules on three separate occasions in order to reach a group consensus. Completion time for each questionnaire is estimated at 10 minutes thus the entire project should require approximately 30 minutes. Please be assured that confidentiality of individual responses will be maintained.

Please take a minute to complete the enclosure indicating your willingness to participate in the three round questionnaire and return the enclosure in the provided self-addressed and stamped envelope. Your assistance in marking and returning the enclosure in a prompt manner is greatly appreciated.

Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing for the community based primary health care nurse practitioner. I am looking forward to the possibility of working with you on this project. All participants will receive details of the findings of the study. Thank you for your consideration.

Sincerely,

Julie K. Putnam, R.N., Ed.S.
Sigma Theta Tau, Phi Kappa Phi
R.R. #2 Box 23
Carbondale, KS 66414-8916

IDENTIFICATION OF A MODEL MASTERS DEGREE IN NURSING

FOR THE COMMUNITY-BASED PRIMARY CARE NURSE PRACTITIONER

THREE ROUND QUESTIONNAIRE

NAME _____

TITLE _____

*ADDRESS _____

_____

_____

*Please include your address if different from this mailing.

_____ Yes, I will participate in a three round questionnaire.

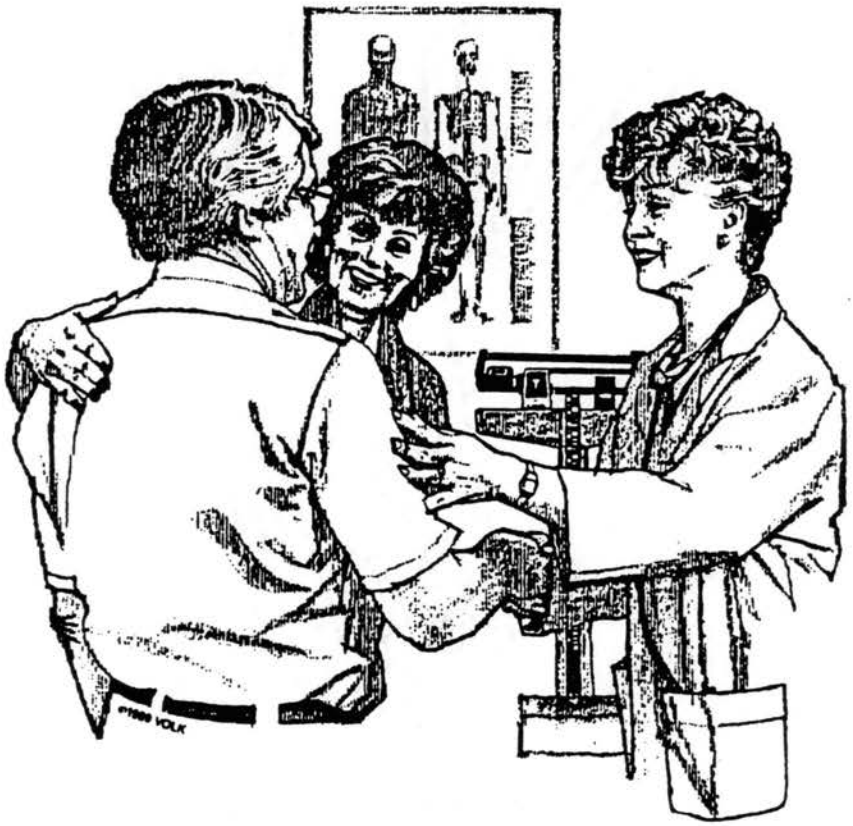
_____ No, I will not be able to participate in a three round questionnaire.

APPENDIX I

ROUND I QUESTIONNIARE

Envision New Horizons

Round I



Julie K. Putnam, RN, EdS
R.R. #2 Box 23
Carbondale, KS 66414
(O) (913) 273-7140
(H) (913) 836-2323

June 1, 1994

Dear Colleague:

Thank you for accepting my invitation to envision a model masters degree program for the community-based primary health care nurse practitioner. The response has been excellent confirming the need for and interest in the development of a model program.

This research project will utilize a three round questionnaire to achieve a shared vision of the education modules and components necessary at the masters level to prepare professional nurses as community-based primary health care practitioners. Furthermore, it is the understanding of this study that the primary health care nurse practitioner will deliver health-oriented services such as physical exams, immunizations, treatment of minor illnesses, and prescription authorizations. The nurse practitioner's role will likewise include the delivery of basic health education, preventive services, surveillance and management of problems in health maintenance, and appropriate treatment referrals.

As you indicate the degree of importance for each proposed module, feel free to record any additions or comments under the "Recommendation Section" of the questionnaire booklet. Upon completion of the questionnaire, please secure the booklet with a staple prior to mailing. To expedite the mailing process I have self-addressed and stamped the back of the booklet.

After all questionnaires from the panel have been received and tabulated, the results of Round I and a revised questionnaire booklet will be sent. The questionnaire for Round II will invite you to rank order the proposed education modules and components by degree of importance.

Thank you for your participation. Your effort to answer and return this first round questionnaire in a prompt manner is greatly appreciated.

Sincerely,

DIRECTIONS: Please circle the number corresponding to your opinion of the importance of the proposed education module.

1 - no importance
2 - little importance
3 - some importance
4 - much importance
5 - critical importance

PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
PHARMACOLOGY					
Effects of Drugs & Foreign Compounds on Biological Systems . . . . . * physiological * biochemical	1	2	3	4	5
Mechanisms Responsible for Therapeutic & Toxic Effects.	1	2	3	4	5
Immunopharmacology	1	2	3	4	5
Pharmacologic Management . . . . . * basis of drug therapy * uses & disadvantages of drugs * behavioral aspects of taking/receiving drugs * strategies with/without prescriptive authority	1	2	3	4	5

RECOMMENDATIONS: _____

_____

_____

PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
CLINICAL NUTRITION					
Nutrition in Disease.	1	2	3	4	5
* disease effects on nutrient metabolism					
* physiological basis of nutrition care					
* biochemical basis of nutrition care					
Assessment.	1	2	3	4	5
Counseling.	1	2	3	4	5
Diet Therapy.	1	2	3	4	5
Nutrition and Food Behavior	1	2	3	4	5
* factors influencing the use of food					
* physiological					
* environmental					
* cultural					
* economic					
Nutrition and Exercise.	1	2	3	4	5
Community Nutrition	1	2	3	4	5
* factors influencing nutritional status					
* physiological					
* environmental					
* cultural					
* economic					

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
HEALTH PROMOTION AND WELLNESS					
Common Public Health Problems	1	2	3	4	5
Epidemiology.	1	2	3	4	5
Holistic Health Maintenance . . . . . (measures to prevent illness, maintain maximal function, and promote physical, mental, & social well-being)	1	2	3	4	5
Health Assessment . . . . . * biographic & demographic data * health risk appraisal * growth & development concepts * health history & physical exam * screening tests	1	2	3	4	5
Health Promotion Programs . . . . . * evaluation/screening * education/motivation * behavior change (participatory) * organizational enhancement * immunizations * counseling	1	2	3	4	5
Community Health Goal Strategies. . . . * networking * collaboration * team (interdisciplinary) approaches	1	2	3	4	5
Behavioral Theories & Concepts.	1	2	3	4	5
Biobehavioral Mechanisms of Health. . .	1	2	3	4	5
Family Systems Theory	1	2	3	4	5
Models of Community Based Health Promotion and Preventive Care	1	2	3	4	5

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
MANAGEMENT OF HEALTH PROBLEMS					
Conceptual Framework.	1	2	3	4	5
* incidence					
* etiology					
* risk factors					
* pathophysiology					
* clinical manifestations					
* diagnostic assessment					
Managed Care.	1	2	3	4	5
* issues					
* team (interdisciplinary) approach					
* informational computer networking					
* clinical decision making					
* treatment referrals					
* strategies					
* evaluation of health outcomes					

RECOMMENDATIONS: _____

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COMMUNITY BASED HEALTH EDUCATION					
Principles of Teaching & Learning . . .	1	2	3	4	5
Risk Management Education	1	2	3	4	5
Health Belief Model	1	2	3	4	5
* individual perceptions					
* modifying factors					
* likelihood of action					
Economic, Political, & Ethical Issues .	1	2	3	4	5
Community Based Program Design.	1	2	3	4	5
* needs assessment					
* planning: expected outcomes					
* implementation & evaluation					

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE

NURSING RESEARCH

Foundations 1 2 3 4 5
* research dimensions, tools, & design
* data collection
* statistical analysis & interpretation
* critique/analysis of nursing theory & research
* presenting the research report

Biostatistics 1 2 3 4 5

Major Discipline Questions. 1 2 3 4 5
* nature
* content
* noteworthy paradigm solutions

RECOMMENDATIONS: _____

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ADVANCED ROLE DEVELOPMENT

Conceptual Framework. 1 2 3 4 5
* ethical decision making models
* professional leadership
* community role as a professional
* interdisciplinary team
* debates (e.g. nurse practice acts)

Linkage Between Health & Social Issues. 1 2 3 4 5

Models of Planned Change. 1 2 3 4 5

RECOMMENDATIONS: _____

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PROPOSED EDUCATION MODULE	DEGREE OF IMPORTANCE				
FISCAL MANAGEMENT					
Cost Accounting, Benefit, Effectiveness and Documentation Requirements	1	2	3	4	5
Budgeting	1	2	3	4	5
Ethical & Legal Issues.	1	2	3	4	5
Finance Alternatives. . . . . (community, state, federal or insurers)	1	2	3	4	5

RECOMMENDATIONS: _____

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CLINICAL PRACTICUM SITES					
Community Based Health Centers.	1	2	3	4	5
* school					
* work place (industry & business)					
* rural community					
* economically depressed areas					
Primary Health Care Providers	1	2	3	4	5
* ambulatory care centers					
* physician's office					
* emergency department					
CLINICAL PRACTICUM SKILLS					
Individual Practitioner Skills.	1	2	3	4	5
* health promotion & maintenance					
* disease prevention					
* early diagnosis of disease/disability					
* health-illness client management					
Working with Communities.	1	2	3	4	5

RECOMMENDATIONS: _____

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APPENDIX J

ROUND I MASTER SHEET

ROUND I MASTER SHEET
Panel Recommendations

PROPOSED EDUCATION MODULES

1. Revisions:
   a. Rename the title of the "Advanced role development" module to "Advanced nursing leadership".

PHARMACOLOGY MODULE

1. Additions:
   a. Develop a pharmacology component that includes a health promotion framework, experiences people have with drug prescriptions, and iatrogenics. The health promotion framework should also enhance the nurse practitioner's knowledge in the areas of 1) reshaping health seeking behaviors; 2) counseling and education; 3) health risk awareness; 4) health care alternatives; 5) informed decision making, and health promotion skills, services, and support.

   b. Create a pharmacology component to include modalities that complement or replace drug management. In addition, the "Alternative health care management" component should enhance the nurse practitioner's skill in therapeutic touch, massage, yoga self-help, acupuncture, and over use of pharmacology.

2. Revisions:
   a. Revise the "Effects of drugs and foreign compounds on biological systems" to include the basis of drug therapy, uses and disadvantages of drugs, mechanisms of action, physiological systems, biochemical effects, adverse effects, hazardous wastes, environmental effects, and self-induced inputs/effects.

   b. Enhance the "Pharmacologic management" component to include: laboratory/diagnostic tools/tests, prescriptive and non prescriptive medications, and primary health care, and immunizations.

3. Recommendations:
   a. A model masters program should include 1) solid courses in pharmacology; 2) principles in basic mechanisms; 3) specific drugs and detailed therapeutic changes; 4) potential drug interactions; 5) side effects; 6) treatment responses, and environmental effects such as hazardous wastes and self-induced inputs/effects.

   b. Several courses may need to be developed e.g., adult, child, health care of women primary care.

CLINICAL NUTRITION MODULE

1. Additions:
   a. Add a health promotion framework to the clinical nutrition module.

   b. Create a component entitled "Nutrition in health promotion to enhance the nurse practitioner's expertise in 1) nutrition and exercise; 2) balanced nutrition; 3) nutritional deficits/excess; 4) stress management; 5) coping skills and strengths; 6) reshaping health seeking behaviors; 7) counseling/education, and 8) community agencies.

   c. Utilize an "across the life span" emphasis for the "Assessment" and "Counseling" components.

   d. Expand the "Nutritional counseling/education" component to include 1) interaction of food use; 2) food abuse and stress in the community; 3) nutrition and exercise health promotion; 4) food/nutrient intake according to age requirements; 5) vitamin and mineral supplementation; 6) developmental role of nutrition in disease prevention; 7) geriatric nutritional and pharmacological management, and 8) health resources.

2. Revisions:
   a. Delete the subheading "Community nutrition" component and move the previously identified concepts under "Factors influencing dietary patterns".

   b. Combine "Nutrition and food behavior" and "Community nutrition" components to formulate a new component entitled "Factors influencing dietary patterns".

   c. Design the "Factors influencing dietary patterns" to present 1) physiological; 2) environmental; 3) community norms; 4) mental/emotional; 5) personal preferences and values; 6) socioeconomic status; 7) peer groups; 8) cultural; 9) lifestyle; and 10 religion.

   d. Expand the "Nutrition in disease" component to include disease effects on nutrient metabolism, physiological basis of nutritional care, and pharmacology interaction with nutrition.

   e. The "Nutritional health assessment" component should include concepts in body measurement, lab studies, clinical signs of nutritional status, and dietary history.

f. Incorporate "Diet therapy" and "Nutrition and food behavior" into the "Counseling" component.

3. Recommendations:
   a. The community-based nurse practitioner requires additional nutritional study in the areas of exercise and geriatrics including management of malnutrition and medication effects on nutrition.

HEALTH PROMOTION AND WELLNESS MODULE

1. Additions:
   a. Create a new component entitled "Holistic health maintenance.

   b. Health promotion philosophy & framework should pervade the model.

   c. Develop a "Community-based health promotion counseling and education" component.

2. Revisions:
   a. Consolidate the number of proposed components to five.

   b. Design the "Holistic health maintenance" component to present 1) global view of health; 2) prevention of illness; 3) maintenance of maximal function; 4) biobehavioral mechanisms of health; 5) common public health problems amenable to screening and early diagnosis, and 6) epidemiology of infectious and chronic disease.

   c. Expand the component entitled "Community health goal strategies" to include networking, interdisciplinary team collaboration, policy development, organizational enhancement, counseling/education, and health services (e.g. immunizations).

   d. Change the title of the "Family systems theory" component to "Health promotion and the family".

   e. Design the "Health promotion and the family" component to include family dynamics, systems theory, assessment, counseling/education, health promotion concepts, anticipatory guidance, partnerships, networking sessions, and evaluation.

   f. Move the components of "Health promotion programs", "Behavioral theories and concepts", and "Models of community-based health promotion and preventive care" under the "Community-based health promotion counseling and education" component.

g. Family dynamics, family assessment, and family counseling/evaluation are more critical than the systems theory.

h. Health promotion and wellness module is of the utmost importance.

COMMUNITY-BASED HEALTH EDUCATION MODULE

1. Additions:
   a. Add the concept of "health promotion" to the "Risk management education" component.

   b. Develop a new component entitled "Health promotion and maintenance across the life span. Design the component to include the concepts of: 1) self-responsibility; 2) physical stamina and strength; 3) intellectual capacities; 4) stress control; 5) nutritional intake; 6) environmental control, and 7) financial self-reliance.

   c. Develop a component that addresses the role of nursing in a global society. Design the "International health care" component to present the role of nursing, networking, and opportunities for theory/clinical rotation aboard.

   d. Design the "Factors" element of the "Community-based program design for health promotion" component to utilize a participant-oriented and intergenerational focus and afford nurse practitioners knowledge and skills in: 1) individual and community empowerment; 2) networking; 3)inter-agency organization collaboration; 4) communication skills; 5) assertiveness training; 6) economic, political, and ethical issues, and 7) health counseling/education.

   e. Design the "Action plan" element of the "Community-based program design for health promotion" component to present the following concepts: 1) community development, needs, and assets assessment; 2) acquiring participant involvement; 3) goals, objectives, and planning expected outcomes; 4) creating a participative learning climate; 5) facilitating interaction among participants, and 6) developing teaching tools (e.g. handouts and audiovisuals).

2. Revisions:
   a. Change the name of the "Principles of teaching and learning" component to "Adult learning strategies to promote health". Design the component to include learning strategies such as demonstrations, role playing, discussion sessions, symposiums, self-study, and field trips.

3. Recommendations:
   a. Physical assessment should be considered as basic preparation for the community-based primary health care nurse practitioner.

   b. Expand the content of the "Health risk management education" component to include: identification, evaluation, and correction of potential health and environmental risks that could lead to injury or illness.

   c. Revise the "Program design" component to reflect community-based methods to share information. Design the "Community-based program design for health promotion" component to include the health belief model and economic political and ethical issues as supporting program design concepts. Also add factors that influence the educational process and action plans to implement community-based methods of sharing information.

3. Recommendations:
   a. The community education aspects of the model might better relate to the aspects of community-based ways to share information.

MANAGEMENT OF HEALTH PROBLEMS MODULE

1. Additions:
   a. Add the concepts of physiology, diagnostic interventions, and physical assessment (related to health problems) to the "Fundamentals of acute and chronic care management/treatment" component.

   b. Develop a component entitled "Focus of acute and chronic care management/treatment. Design the newly created component to present: 1) the use of physical exam and diagnostic tests to identify treatment; 2) a problem solving approach to illness; 3) the client's defect or dysfunction, and 4) the physical and biological aspects of diseases and conditions.

2. Revisions:
   a. Change the module entitled "Management of health problems" to "Primary health care management".

   b. Design the "Primary health care management" module to include the components: 1) fundamentals of the wellness model; 2) health focus of the wellness model; 3) fundamentals of acute/chronic care management and treatment; 4) focus of acute/chronic care management and treatment, and 5) nursing strategies and interventions.

   c. Design the "Fundamentals of the wellness model" component to enhance the nurse practitioner's skills in management and clinical decision making by including the concepts of global health, health care needs of populations at risk, clinical decision making, and achieving an optimal level of health.

   d. Design the "Health focus of the wellness model" to afford nurse practitioners didactic instruction on how to foster the client's health awareness and personal growth and self-actualization through counseling and education.

   e. Delete the component heading "Conceptual framework" and utilize "Fundamentals of acute and chronic care management/treatment.

   f. Change the name of the "Managed care" component to "Nursing strategies and interventions".

   g. Design the "Nursing strategies and interventions" component to include: 1) interdisciplinary team approach; 2) health promotion and maintenance skills, services, and support; 3) knowledge/use of data bases, and 4) surveillance and management of health.

3. Recommendations:
   a. Place a greater emphasis on health promotion, acute and chronic care management/treatment, and nursing strategies.

   b. A good foundation in pathophysiology, physiology, and physical assessment is basic preparation for the community-based primary health care nurse practitioner.

NURSING RESEARCH MODULE

1. Additions:
   a. Add the concepts of qualitative and participatory action research methods and research outcomes to the "Foundations" component.

   b. Add interpreting data to the "Biostatistics" component.

   c. Create a practice application of nursing research to promote health and participation in research component. Design the component to enhance the nurse practitioner's ability to 1) use applied research; 2) critique nursing theory and research; 3) apply and analyze research techniques; 4) reshape client health seeking behaviors, and 5) counsel clients based upon research outcomes in the areas of health risk awareness, health care alternatives, informed decision making, and health promotion.

   d. Develop a component entitled participation in research activities. Design the course work to include opportunities to read nursing research articles and share information on an international basis.

2. Revisions:
   a. Change the title of the "Major discipline" component to "Major health promotion issues".

3. Recommendations:
   a. Revise the proposed nursing research module to include practice applications of nursing research, both qualitative and quantitative research methods, and a health promotion framework.

ADVANCED ROLE DEVELOPMENT MODULE

1. Additions:
   a. Create a health promotion conceptual framework component for the advanced role development module. Design the component to include the concepts: 1) taxonomies, diagnoses, interventions and health outcomes for the individual, family, and community; 2) reshaping health seeking behaviors; 3) care of the traditionally underserved populations; 4) international nursing; 5) interdisciplinary approach; 6) linkage between health, social, ethical, and legal issues; 7) ethical decision making models, and 8) debates.

b. Create a role development component to enhance the nurse practitioner's ability to assume the role of community-based primary health care provider. Design the component to present the community role of the nurse practitioner as a professional citizen, caring as a moral ground for nursing, and issues such as professional leadership/management, credentialing, change agent role, and marketing role.

c. Develop a "Nursing administration" component to supplement the role development component. Design the nursing administration component to present health management/leadership including theories, models, and clinical applications.

2. Revisions:
   a. Move fiscal management and finance alternatives to the advanced nursing practice module because health leadership skills are required to manage monetary resources.

   b. Design the "Fiscal management" component to include the following concepts: 1) marketing and budgeting; 2) cost accounting, benefit, and effectiveness; 3) computer skills for software applications, and 4) impact of financing policies on health care delivery.

   c. Design the "Finance alternatives" component to encourage the utilization of: 1) nurses in philanthropy; 2) volunteers, and 3) bonds for rural communities to establish clinics and pay for operations.

3. Recommendations:
   a. Revise the module to reflect leadership, a global emphasis, professional role development, group and community taxonomies, health promotion, and fiscal management.

   b. Graduate programs will need to identify prerequisites carefully.

   c. Management and leadership theory models and applications are vital for the nurse practitioner who often needs to contribute to over-all clinic and agency administration.

   d. Basic knowledge of fiscal management and financial alternatives are needed by all nurse practitioners. However, a sophisticated knowledge base is required when the nurse practitioner anticipates clinic management or a private practice situation.

e. Suggest financial didactic information come from experienced and financially successful practitioners or business people.

CLINICAL PRACTICUM MODULE

1. Revisions:
   a. Modify the clinical practicum module to include the following components: 1) clinical education strategies for health promotion; 2) role opportunities; 3) primary health care management opportunities; 4) qualitative research investigation, and 5) education outcomes.

   b. Design the clinical education strategies for health promotion component to provide an overall plan for the clinical practicum experience. Afford the nurse practitioner the following education strategies: 1) an internship or post-graduate supervised experience of 1000 to 3500 actual practice hours; 2) preparation for team practice; 3) clinical experiences utilizing the wellness model and acute/chronic care management, and 4) continuing education.

   c. Design the role opportunities component to offer supervised clinical rotations in both an international setting and community-based systems.

   d. Design the primary health care management opportunities component to include physical assessment, health risk appraisal, diagnostic/screening interventions, decision making, health promotion skills, services, and support, and treatment referrals.

   e. Design the qualitative research component to offer the nurse practitioner an opportunity to conduct investigative research and to look at variables in the community setting.

   f. Evaluate the nurse practitioner's degree of success in meeting the goals and objectives of the masters program by adding an education outcome component. Evaluation criteria should include the ability of the nurse practitioner to provide and manage the delivery of primary health care services and to work as a team member.

2. Recommendations:
   a. Reinforce the community-based health promotion emphasis of the didactic instruction.

b. Afford the nurse practitioner a broad basis for practice in a variety of settings such as nursing homes, community-based health centers home health, HMO or clinics and other options including shopping centers.

c. Provide the nurse practitioner an opportunity to utilize qualitative and participatory actions research methods.

d. Need to stress community as target - therefore utilize community organizations/sites for experience.

e. Clinical sites are likely to vary by geographic region. What's important is the content and clinical role opportunities rather than sites per se.

f. Community-based health centers are fine if management includes more than client education. Nurse practitioners need to learn treatments and diagnostic interventions.

g. ARNP programs should be 2 years in duration, to cover both the graduate course work leading to a masters degree in nursing plus adequate clinical practice time.

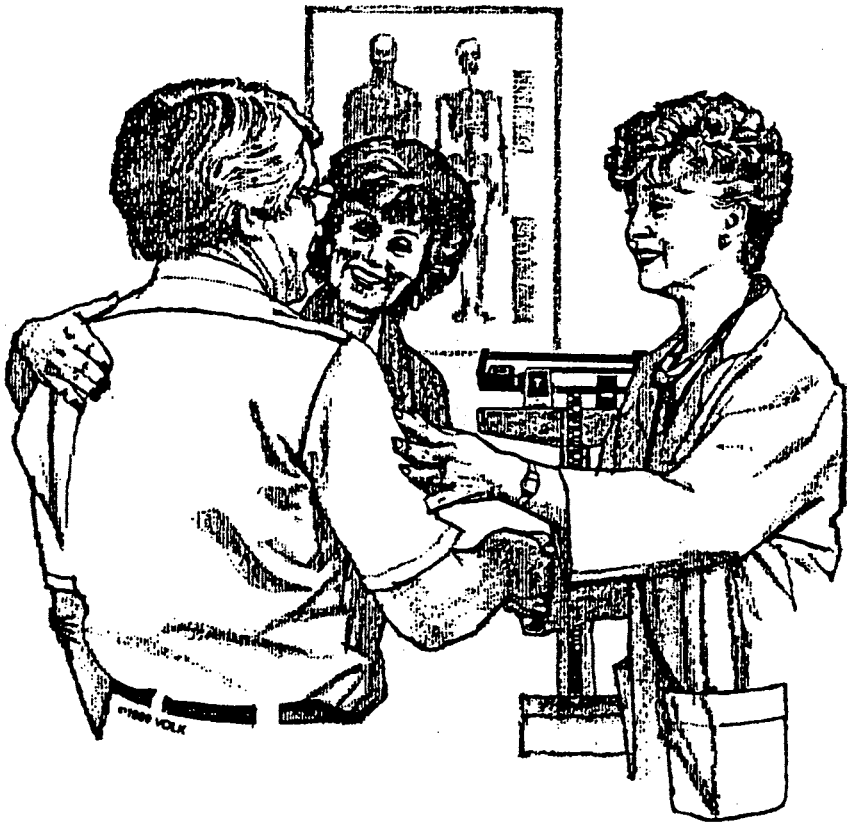
h. ARNP's need more skills in both acute and chronic care medicine treatment.

APPENDIX K

ROUND II QUESTIONNAIRE

Envision New Horizons

Round II



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July 1994

Dear Colleague:

Thank you for your valuable input and continued assistance on the development of a model masters degree program. The response rate to the first questionnaire has been excellent!

Each item in this questionnaire was selected as being "of critical importance" during Round I. The second questionnaire therefore invites you to rank order the proposed education modules and components. Upon completion of the questionnaire, please secure the booklet with tape or a staple prior to mailing. To expedite the mailing process I have self-addressed and stamped the back of the booklet.

After all questionnaires from the panel have been received and tabulated, the final questionnaire booklet will be sent. The questionnaire for Round III will elicit your concurrences or differences with the group consensus on the importance of the proposed education modules and components.

Your continued support is greatly appreciated. Together we can envision a model masters degree program that will successfully prepare professional nurses to meet America's health care needs for the 21st century.

Sincerely,

DIRECTIONS: Please rank order the degree of importance of the proposed education modules and components based upon the following role expectations:

The community-based primary health care nurse practitioner will deliver health promotion services to enhance the consumer's awareness, influence attitudes to achieve an optimal level of physical/mental health, and improve the physical/social environment.

To promote health, the nurse practitioner will perform physical exams, immunizations, treatment of minor illnesses, and prescription authorizations. Furthermore, the nurse will identify health care alternatives, deliver basic health education, preventive services, surveillance and management of problems in health maintenance, and appropriate treatment referrals.

As a result of the nurse practitioner's health promotion skills, services, and support the client will have an increased capability to access health care, practice health seeking behaviors, assume responsibility for personal health self-care, and conduct informed decision making.

PROPOSED EDUCATION MODULES: Rank order the degree of importance to a model masters degree program from one (most critical) to eight (minimal).

_____ **PHARMACOLOGY**

_____ **CLINICAL NUTRITION**

_____ **HEALTH PROMOTION AND WELLNESS**

_____ **COMMUNITY-BASED HEALTH EDUCATION**

_____ **PRIMARY HEALTH CARE MANAGEMENT**

_____ **NURSING RESEARCH**

_____ **ADVANCED NURSING LEADERSHIP**

_____ **CLINICAL PRACTICUM**

PHARMACOLOGY COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Effects of Drugs & Foreign Compounds on Biological Systems**

* Basis of drug therapy
* Uses & disadvantages of drugs
* Mechanisms of action
* Hazardous wastes
* Self-induced inputs/effects
* Physiological effects
* Biochemical effects
* Adverse effects
* Environmental effects

_____ **Immunopharmacology**

_____ **Pharmacology in Health Promotion**

* Health promotion skills, services and support
  * Reshaping health seeking behaviors
    * Counseling/education
      * health risk awareness
      * health care alternatives
      * informed personal health care decision making
* Experiences people have with drug Rx & iatrogenics
* Behavioral aspects of taking/receiving drugs

_____ **Pharmacologic Management**

* Laboratory/diagnostic tools/tests
* Adult, child & health care of women - primary care
* Strategies with prescriptive authority
* Prescriptive/nonprescriptive medications
* Immunizations

_____ **Alternative Health Care Management/Healing Strategies**

* Therapeutic touch
* Massage
* Yoga
* Self-help
* Acupuncture

CLINICAL NUTRITION COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Nutrition in Health Promotion**
* Nutrition & exercise (components of fitness)
* Balanced nutrition
* Nutritional deficits/excess
* Stress management
* Coping skills & strengths
* Involvement of community agencies/resources to enhance health awareness and health promotion programs
* Reshaping health seeking behaviors
  * Counseling/education
    * health risk awareness
    * health care alternatives
    * informed personal health care decision making
    * health promotion skills, services & support

_____ **Factors Influencing Dietary Patterns**
* Physiological
* Environmental
* Community norms
* Mental/emotional
* Personal preferences & values
* Socioeconomic status
* Peer groups
* Cultural
* Lifestyle
* Religious

_____ **Nutrition in Disease**
* Disease effects on nutrient metabolism
* Physiological basis of nutrition care
* Biochemical basis of nutrition care
* Pharmacology interaction with nutrition

_____ **Nutritional Health Assessment Across the Life Span**
* Body measurements
* Lab studies
* Clinical signs of nutritional status
* Dietary history

_____ **Nutritional Counseling/Education Across the Life Span**
* Nutrition & food behavior
* Interaction of food use/abuse & stress - community
* Nutrition & exercise in health promotion
* Diet therapy
* Food/nutrient intake according to age requirements
* Vitamin/mineral supplementation
* Developmental role of nutrition in disease prevention
* Geriatric nutritional & pharmacological management
* Health resources

HEALTH PROMOTION AND WELLNESS COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Holistic Health Maintenance**
* Global view of health
* Prevention of illness
* Maintenance of maximal function
* Promotion of physical, mental & social well-being
* Biobehavioral mechanisms of health
* Common public health problems
  (amendable to screening and early diagnosis)
* Epidemiology of infectious & chronic diseases

_____ **Health Promotion and the Family**
* Dynamics
* Systems theory
* Assessment
* Counseling/education
* Anticipatory guidance
* Partnerships
* Networking sessions
* Evaluation

_____ **Health Assessment**
* Biographic & demographic data
* Health risk/lifestyle appraisal
* Growth & development
* Health history & physical exam
* Diagnostic/screening tests

_____ **Community Health Goal Strategies**
* Networking
* Interdisciplinary team collaboration
* Policy development
* Organization enhancement
* Counseling/education
* Health services (e.g. immunizations)

_____ **Community-Based Health Promotion Counseling/Education**
* Education program models
* Evaluation/screening
* Motivational program components to promote health
  * role of the nurse
  * empowerment of client to engage in healthy behaviors
* Health promotion & risk behavioral theories & concept
* Reshaping health seeking behaviors
* Socioeconomic problems that affect health

COMMUNITY-BASED HEALTH EDUCATION COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Adult Learning Strategies to Promote Health**
(e.g. demonstrations, role playing, discussion sessions, symposiums, self-study & field trips)

_____ **Health Risk Management Education**
(e.g. identification, evaluation & correction of potential health & environmental risks that could lead to injury or illness)

_____ **Community-Based Program Design for Health Promotion**
* Factors
  * participant-oriented focus
  * individual & community empowerment
  * networking & inter/agency organization collaboration
  * communication skills & assertiveness training
  * intergenerational focus
  * economic, political & ethical issues

* Health Belief Model
  (e.g. individual perceptions, modifying factors & likelihood of action)

* Action Plans
  * Development, needs & assets assessment
  * Acquiring participant involvement
  * Goals, objectives & planning expected outcomes
  * Creating a participative learning climate
  * facilitating interaction among participants
  * Developing teaching tools (handouts & audiovisuals)
  * Implementation
  * Health outcome interpretation, synthesis & evaluation

_____ **Health Promotion/Maintenance Across the Life Span**
* Factors
  * Self-responsibility
  * Physical stamina/strength
  * Intellectual capacities
  * Stress control
  * Nutritional intake
  * Environmental control
  * Financial self-reliance

_____ **International Health Care**
* Role of nursing
* Networking
* Opportunities for theory rotation aboard

PRIMARY HEALTH CARE MANAGEMENT COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Fundamentals of the Wellness Model**
* Global health
* Health care needs of populations at risk
* Clinical decision making
* Achieving an optimal level of health
  * Physical, mental & social well-being
  * Dynamic state of health - homeostasis
  * Improvement of physical & social environment

_____ **Health Focus of the Wellness Model**
* Fostering awareness
* Counseling/education
* Growth
* Self-actualization

_____ **Fundamentals of Acute & Chronic Care Management/Treatment**
* Incidence
* Etiology
* Risk factors
* Pathophysiology
* Physiology
* Clinical manifestations
* Diagnostic interventions
* Physical assessment (related to health prob)

_____ **Focus of Acute & Chronic Care Management/Treatment**
* Client's defect or dysfunction (e.g. signs & symptoms)
* Physical & biologic aspects of diseases & conditions
* Problem-solving approach
* Physical exam & diagnostic tests to identify treatment

_____ **Nursing Strategies & Interventions**
* Interdisciplinary team approach
* Health promotion/maintenance skills, services & support
* Disease prevention
* Reshaping health seeking behaviors
* Maximizing client's potential

* Informational computer networking
* Knowledge/use of data bases
* History & physical assessment
* Health risk appraisal
* Diagnostic/screening tests
* Health preventive services
* Surveillance & management of health problems
  * Pharmacologic & nutritional strategies
  * Counseling/education
* Treatment referrals
* Evaluation of health outcomes

NURSING RESEARCH COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Foundations**
* Research dimensions, tools & design
* Qualitative & participatory action research methods
* Data collection
* Statistical analysis & interpretation
* Research outcomes
* Presenting the research report

_____ **Biostatistics/Interpreting Data**

_____ **Practice Applications of Nursing Research to Promote Health**
* Use of applied research
  * Critique/analysis of nursing theory & research
  * Clinical application of research techniques/analysis

* Reshaping health seeking behaviors
  * Counseling/education based upon research outcomes
    * health risk awareness
    * health care alternatives
    * informed personal health care decision making
    * health promotion skills, services & support

_____ **Participation in Research Activities**
(e.g. readings & sharing research information on an international basis)

_____ **Major Health Promotion Issues**
* Nature & content
* Noteworthy paradigm solutions to promote health

ADVANCED NURSING LEADERSHIP COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Role Development**
* Community role as a professional citizen
* Caring as moral ground for nursing
* Issues
  * Professional leadership/management
  * Credentialing
  * Change agent role across various delivery systems
  * Marketing role

_____ **Nursing Administration**
* Health management/leadership
  * Theories & models
  * Clinical application

_____ **Fiscal Management**
* Marketing & budgeting
* Cost accounting, benefit & effectiveness
* Documentation requirements
* Computer skills for software applications
* Impact of financing polices on health care delivery (e.g. cost containment, quality & access to care)

_____ **Finance Alternatives**
* Bonds for rural communities to establish clinics and help pay for operations
* Nurses in philanthropy
* Use of volunteers
* Sources of financial support (e.g. community, county, state, federal or insurers)

_____ **Health Promotion Conceptual Framework**
* Taxonomies, diagnoses, interventions, and outcomes for the individual, family & community
* Reshaping health seeking behaviors
* Care of traditionally underserved populations
* International nursing
* Interdisciplinary team approach
* Linkage between health, social, ethical & legal issues
* Ethical decision making models
* Debates (e.g. nurse practice acts, use of life support)

CLINICAL PRACTICUM COMPONENTS: Rank order the degree of importance from one (most critical) to five (minimal).

_____ **Clinical Education Strategies for Health Promotion**
* Internship Model or Post-Graduate Supervised Practice
  * 1000-3500 actual practice hours
* Interdisciplinary Education (prep for team practice)
* Wellness Model
* Acute & Chronic Care Management/Treatment
* Enhancement of Professional Competence
  (e.g. research newsletters & self-study)

_____ **Role Opportunities**
* International Clinical Rotations
* Community-Based Systems
  (e.g. hospitals, nursing homes, shopping centers, physicians' offices, home health & neighborhood health centers)

_____ **Primary Health Care Management Opportunities**
* Physical assessment & health risk appraisal
* Diagnostic/screening interventions
* Decision making
* Wellness model
* Health promotion skills, services & support
* Acute & chronic care management/treatment
* Treatment referrals

_____ **Qualitative Research Investigation**
(e.g. client observation, interview & case study)

_____ **Educational Outcomes**
* Provider/Manager of Primary Health Care
  * Health promotion skills, services & support
  * Disease preventive services
  * Early diagnosis of disease/disability
  * Communication skills across the life span
  * Acute & chronic care management/treatment

* Interdisciplinary Team Member
  * Ability to provide primary health care and promote the health/environment of individuals, families, & groups within community-based systems

APPENDIX L

ROUND II MASTER SHEET

ROUND II MASTER SHEET
Panel Recommendations

PHARMACOLOGY MODULE

1. Additions:
   a. Develop a new component to present issues in pharmacology such as provider addictions, abuse, overuse of medication, prescriptions as power over clients, and legal aspects.

2. Revisions:
   a. Move immunopharmacology to the component entitled effects of drugs and foreign compounds on biological systems.

3. Recommendations:
   a. The proposed pharmacology module presumes the appropriate science background including immunology.

   b. I don't see alternative health care management and healing strategies as part of pharmacology. This component should be incorporated into the primary health care management module.

CLINICAL NUTRITION MODULE

1. Additions:
   a. Enhance the nutritional counseling and education to promote health across the life span by adding nutritional assessment and intergenerational cycles.

   b. Develop a new component entitled practical management strategies to assist the community-based nurse practitioner in the clinical management of nutritional care. Design the component to present the following concepts: 1) informational networking; 2) treatment referrals; 3) involvement of community agencies and resources to enhance health awareness and health promotion programs; 4) geriatric nutritional and pharmacological management, and 5) health care alternatives.

2. Revisions:
   a. Delete the term "disease" in the component entitled nutrition in disease as the process of nutrition is essential for proper body functioning and the maintenance of health.

b. Rename the nutrition in disease component to nutrition therapy and health maintenance. Design the component to include nutrient metabolism, physiological basis of nutrition care, pharmacology interaction with nutrition, and informed decision making.

c. Delete the nutrition in health promotion component heading and move the health promotion concepts of the component to nutritional counseling and education as possible client services and strategies.

d. Transfer the concepts presented in the nutritional health assessment across the life span to the clinical decision making subcategory of the clinical practicum.

e. Revise the nutritional counseling and education to promote health across the life span to include: 1) health promotion skills, services, and support; 2) nutritional and emotional health assessment; 3) health risk awareness; 4) intergenerational cycles, and 5) reshaping health seeking behaviors.

3. Recommendations:
   a. Didactic instruction for the nutrition in disease and nutrition in health promotion components should be presented at the undergraduate level.

   b. Consider the nutritional health assessment across the life span component as clinical application for the nutrition in health promotion component.

   c. Nutritional health assessment across the life span is the clinical application of components entitled nutrition in health promotion and nutritional counseling/education across the life span.

   d. Nutritional assessment is a part of counseling.

   e. Nutrition/emotional
      Assessment -
      Nutrition/Fitness

HEALTH PROMOTION AND WELLNESS MODULE

1. Additions:
   a. Design the module to include a health promotion philosophical framework and family/community emphasis across the life span.

b. The philosophy of health promotion should include achieving an optimal level of health and well-being and fostering health awareness, personal growth, and self-actualization.

c. Design the emphasis of the health promotion wellness strategies to include individual and family counseling and evaluation, anticipatory guidance and partnerships, informational networking, knowledge/use of data bases, interdisciplinary collaboration, and clinical decision making.

2. Revisions:
   a. Revise the module to include the following components: 1) philosophy of health promotion; 2) family/community holistic assessment and health promotion; 3) family and community health maintenance across the life span; 4) family/community health promotion and wellness strategies, and 5) family/community health promotion and wellness outcomes.

   b. Transfer the component community-based health promotion counseling and education to the community-based health education module.

   c. Move the health promotion and maintenance across the life span component from the community-based health education module to the health promotion and wellness module.

3. Recommendations:
   a. A health promotion philosophy or framework should appear first since all else should flow from that concept.

   b. Outcomes of health promotion should include organizational enhancement, health policy development, achieving an optimal level of health, and health counseling/education.

COMMUNITY-BASED HEALTH EDUCATION MODULE

1. Additions:
   a. Create a new component entitled health counseling and education issues and include the following concepts: economic, political, and ethical issues; health needs and resources of community subpopulations, and socioeconomic problems affecting health promotion.

2. Revisions:
   a. Modify the module to include 1) a health counseling and education framework, program strategies, and issues; 2) health risk management education, and 3) international health care.

3. Recommendations:
   a. Design the health counseling and education framework component to include 1) participant-oriented intergenerational focus; 2) motivational program components to promote health; 3) health promotion and risk behavioral theories and concepts; 4) models of community-based health promotion/preventive care, and 5) health belief model.

   b. Design the health counseling and education program strategies component to present community-based approaches to share information and promote health. Specifically the component should include a health promotion/preventive care program design for culturally and economically diverse populations, adult learning strategies, actions plans, and evaluation.

PRIMARY HEALTH CARE MANAGEMENT MODULE

1. Additions:
   a. Alternative health care management and healing strategies previously identified under the pharmacology module.

2. Revisions:
   a. Transfer the fundamentals and focus of the wellness model and nursing strategies and interventions to the health promotion and wellness module to reduce the possibility of redundancy in the curriculum.

   b. Delete biologic aspects of diseases and conditions and client's defect or dysfunctions as these concepts are included in pathophysiology and clinical manifestations.

   c. Rename the alternative health care management and healing strategies component to traditional health and healing modalities as the original title seems to diminish the component's importance.

3. Recommendations:
    a. Utilize the fundamentals and focus of acute and chronic care and health wellness as the basis for identifying management interventions. Design the component to present 1) clinical decision making; 2) global health care; 3) achieving an optimal level of health, 4) focus and fundamentals of acute and chronic care, and 5) evaluation of health outcomes.

    b. Design the community-based holistic primary health care management component to include dynamics of holistic care, health-preventive services, community-based health promotion, health risk appraisal, treatment referrals, and out-patient health-illness client management.

NURSING RESEARCH MODULE

1. Additions:
    a. Add an international aspect of sharing research information to the components entitled participation in research activities and major health promotion issues.

    b. Add statistical analysis and data interpretation to the biostatistics component.

2. Revisions:
    a. Transfer the qualitative research investigations component from the clinical practicum module to the practice application of nursing research to promote health component.

    b. Revise the major health promotion issues component to also include drawing upon international experience and international colleagues.

3. Recommendations:
    a. Include an international aspect of sharing research data due to the global supply of commodities and mobility of the populace.

ADVANCED NURSING LEADERSHIP MODULE

1. Revisions:
    a. Further define the concepts of role development by including historic aspects, professional role development as consultant, researcher, teacher, clinician, and legal, political action, and feminist issues.

b. Enhance the leadership concepts for the nursing administration/leadership component by adding policy development, practice management, conflict manager-negotiator, grant writing, and program analysis, management, and evaluation.

2. Recommendations:
   a. The module does identify and define inherent aspects of role development for the community-based nurse practitioner.

   b. Caring as moral ground for nursing is only one theoretical construct the model should also include historical aspects of role.

CLINICAL PRACTICUM MODULE

1. Additions:
   a. Add client evaluation and health risk appraisal to the primary health care management opportunities component.

   b. Add nurse advocate and activist to the educational outcomes component.

2. Revisions:
   a. Increase the number of actual practice hours to 3500.

   b. Transfer qualitative research investigation to the nursing research module.

APPENDIX M

ROUND III QUESTIONNAIRE

You be the judge...

THE FINAL BOOKLET

A MODEL

MASTERS DEGREE PROGRAM

Julie Putnam, EdS, RN
R.R. #2 Box 23
Carbondale, KS 66414-8916

August 1994

Dear Colleague:

I am truly grateful for your strong commitment to envision a model masters degree program. Your valuable input has been instrumental in identifying the education modules necessary to prepare primary health care nurse practitioners.

The purpose of the third and final questionnaire is to establish a group consensus on the rank order determination from Round II. The education modules and components are now listed in the rank order of the previous round. To establish a group consensus this questionnaire elicits your concurrence or disagreement with the rank order determination from Round II.

Upon completion of the questionnaire, please secure the booklet with tape or a staple prior to mailing. To expedite the mailing process I have self-addressed and stamped the back of the booklet.

After all questionnaires from the panel have been received and tabulated you will receive a detailed report on the findings. Thank you for your participation. Your effort to complete and return the final questionnaire in a timely manner is greatly appreciated.

Sincerely,

THE EDUCATION MODULES have been prioritized by the panel during Round II with one being "most critical":

1. HEALTH PROMOTION AND WELLNESS
2. PRIMARY HEALTH CARE MANAGEMENT
2. CLINICAL PRACTICUM
3. PHARMACOLOGY
4. ADVANCED NURSING LEADERSHIP
5. COMMUNITY-BASED HEALTH EDUCATION
6. CLINICAL NUTRITION
7. NURSING RESEARCH

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 3.

IF YOU DISAGREE with the group consensus please rank order the Education Modules by degree of importance with one being "most critical" then proceed to Page 3.

_____ Health Promotion and Wellness

_____ Primary Health Care Management

_____ Clinical Practicum

_____ Pharmacology

_____ Advanced Nursing Leadership

_____ Community-Based Health Education

_____ Clinical Nutrition

_____ Nursing Research

THE PHARMACOLOGY COMPONENTS have been prioritized by the panel during Round II with one being "most critical":

1. Effects of Drugs & Foreign Compounds on Biological Systems
2. Pharmacologic Management to Promote Health
3. Pharmacology Issues

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 4.

IF YOU DISAGREE with the group consensus please rank order the Pharmacology Components by degree of importance with one being "most critical" then proceed to Page 4.

_____ Effects of Drugs & Foreign Compounds on Biological Systems

_____ Pharmacologic Management to Promote Health

_____ Pharmacology Issues

THE CLINICAL NUTRITION COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Nutritional Counseling & Education to Promote Health Across the Life Span
2. Nutrition and Health Maintenance
3. Practical Management Strategies
4. Factors Influencing Dietary Patterns/Client Compliance

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 5.

IF YOU DISAGREE with the group consensus please rank order the Clinical Nutrition Components by degree of importance with one being "most critical" then proceed to Page 5.

_____ Nutritional Counseling & Education to Promote Health Across the Life Span

_____ Nutrition and Health Maintenance

_____ Practical Management Strategies

_____ Factors Influencing Dietary Patterns/Client Compliance

THE HEALTH PROMOTION AND WELLNESS COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Philosophy of Health Promotion
2. Family/Community Assessment & Health Promotion
3. Family/Community Health Maintenance Across the Life Span
4. Family/Community Health Promotion & Wellness Strategies
5. Family/Community Health Promotion and Wellness Outcomes

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 6.

IF YOU DISAGREE with the group consensus please rank order the Health Promotion and Wellness Components by degree of importance with one being "most critical" then proceed to Page 6.

_____ Philosophy of Health Promotion

_____ Family/Community Assessment & Health Promotion

_____ Family/Community Health Maintenance Across the Life Span

_____ Family/Community Health Promotion and Wellness Strategies

_____ Family/Community Health Promotion and Wellness Outcomes

THE COMMUNITY-BASED HEALTH EDUCATION COMPONENTS have been prioritized by the panel during Round II with one being "most critical":

1. Health Counseling and Education Program Strategies
2. Health Counseling and Education Framework
3. Health Risk Management Education
4. Health Counseling and Education Issues
5. International Health Care

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 7.

IF YOU DISAGREE with the group consensus please rank order the Community-Based Health Education Components by degree of importance with one being "most critical" then proceed to Page 7.

_____ Health Counseling and Education Program Strategies

_____ Health Counseling and Education Framework

_____ Health Risk Management Education

_____ Health Counseling and Education Issues

_____ International Health Care

THE PRIMARY HEALTH CARE MANAGEMENT COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Basis for Identifying Treatment/Management Interventions

2. Primary Health Care Nursing Interventions

3. Traditional Health and Healing Modalities

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 8.

IF YOU DISAGREE with the group consensus please rank order the Primary Health Care Management Components by degree of importance with one being "most critical" then proceed to Page 8.

_____ Basis for Identifying Treatment/Management Interventions

_____ Primary Health Care Nursing Interventions

_____ Traditional Health and Healing Modalities

THE NURSING RESEARCH COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Practice Applications of Nursing Research to Promote Health
2. Foundations
3. Biostatistics
4. Major Health Promotion Issues
5. Participation in Research Activities

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 9.

IF YOU DISAGREE with the group consensus please rank order the Nursing Research Components by degree of importance with one being "most critical" then proceed to Page 9.

_____ Practice Applications of Nursing Research to Promote Health

_____ Foundations

_____ Biostatistics

_____ Major Health Promotion Issues

_____ Participation in Research Activities

THE ADVANCED NURSING LEADERSHIP COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Role Development
2. Health Promotion Conceptual Framework
3. Fiscal Management
4. Nursing Administration
5. Finance Alternatives

DIRECTIONS:
IF YOU AGREE with the group consensus proceed to Page 10.

IF YOU DISAGREE with the group consensus please rank order the Advanced Nursing Practice Components by degree of importance with one being "most critical" then proceed to Page 10.

_____ Role Development

_____ Health Promotion Conceptual Framework

_____ Fiscal Management

_____ Nursing Administration

_____ Finance Alternatives

THE CLINICAL PRACTICUM COMPONENTS have been prioritized by the panel during Round II with one being "most critical".

1. Primary Health Care Management Opportunities
2. Clinical Education Strategies for Health Promotion
3. Educational Outcomes
4. Role Opportunities

DIRECTIONS:
IF YOU DISAGREE with the group consensus please rank order the Clinical Practicum Components by degree of importance with one being "most critical".

_____ Primary Health Care Management Opportunities

_____ Clinical Education Strategies for Health Promotion

_____ Educational Outcomes

_____ Role Opportunities

The Questionnaire

is now

Complete

Thank You for Your Participation!

APPENDIX N

ROUND III MASTER SHEET

ROUND III MASTER SHEET

Panel Recommendations

1. Clinical Nutrition
   This area is well covered and organized logically.

2. Health Promotion and Wellness
   Family/community health promotion and wellness strategies are inclusive and easy to follow.

3. Community-Based Health Education
   I learned a great deal from this area because it is so well organized.

4. Primary Health Care Management
   I believe it was wise to move alternative health care to primary health care management components. This move allows for reinforcement of learning.

   The primary health care management module is well developed and elicits "critical thinking".

5. Advanced Nursing Leadership
   Legal, political action, and feminist issues for role development ties important area. You have identified areas that need to be an inherent part of role development; such areas need defining and cannot be ignored.

6. General Comments
   You have done a fine job.

   Being a "family" systems nursing specialist I must say I am pleased that component is in there! It is so important to nurse practitioners!

   I agree with these findings. Thank you for allowing me to participate. Effective April 11th I am providing primary health care in a collaborative practice with a physician.

   Thank you for asking me to participate in your project. Good luck with the next step.

   Good luck with your writing & defense - I hope you publish!

   This is excellent! I was amazed to find that I was pretty consistent with my colleagues. Thanks

   I learned a great deal from your study.

APPENDIX O

PARTICIPANTS IN THE IDENTIFICATION OF A MODEL MASTERS PROGRAM MODIFIED DELPHI PROJECT

PARTICIPANTS IN THE THREE ROUND QUESTIONNAIRE

Director of Alternative Care
Mesa, AZ

Associate Chief Nursing Education, Veterans Medical Center
Tucson, AZ

Program Director - Mental Health Services
Calgary District Hospital
Calgary, Alberta, Canada

Nursing Research Consultant
Registered Nurses Association of British Columbia
Vancouver, BC, Canada

Assistant Program Manager
Adult Field Services (Patient Care)
Topeka, KS

Director of Home Health
Stormont-Vail Regional Medical Center
Topeka, KS

Advanced Registered Nurse Practitioners:
Leavenworth, KS
Kansas City, MO

Nursing Education Consultant & Adjunct Professor of Research
Bluffton, SC

Nursing Practitioner & Educational Associate
National Council State Boards of Nursing, Inc
Chicago, IL

Physicians:
Chairman & Program Director
Family Medicine Residency Program
Topeka, Kansas

Internal Medicine Physician
Veterans Medical Center
Topeka, KS

Denver Health and Hospitals, Department of Preventive Medicine
Community Health Services
Denver, CO

Chief Executive Officer
Sigma Theta Tau International Honor Society of Nursing
Indianapolis, IN

Community Nursing leader
Mercy Health Services' Nurses' Council
Farmington Hills, MI

Clinical Director-Breaking the Cycle Project
Arizona State University, Tempe , AZ

Nursing Deans:
Baker University School of Nursing, Topeka, KS
Donnelly College, Kansas City, KS
Yale University, New Haven, CT

Chairpersons:
Division of Nursing, North Park University, Chicago, IL
Science & Role Development Division, University of Pennsylvania, School of Nursing, Philadelphia, PA

Nursing Directors:
Graduate Programs, University of Colorado, Denver, CO
Nurse Practitioner Programs, University of Texas, Galveston, TX
Occupational Health Nursing Program, University of North Carolina at Chapel Hill, Chapel Hill, NC
Coordinator of ACNP Program, Faculty of Nursing, University of Toronto, Toronto, Ontario, Canada

Nursing Professors:
California State University at Long Beach, Long Beach, CA
Husson/Eastern Main Medical Center, Bangor, ME
Lewis & Clark Community College, Godfrey, IL
Madonna University, Livonia, MI
Northwestern Oklahoma State University, Alva, OK
Pennsylvania State University, Hershey, PA
Thomas Jefferson University, Philadelphia, PA
University of Arizona, Tucson, AZ
University of Wisconsin, Oshkosh, WI
University of Virginia School of Nursing, Charlottesville, VA

Editor American Journal of Nursing and Nursing Professor, Rutgers-The State University, Newkirk, NJ

Research Scholar and Associate Nursing Professor, Marquett University, Milwaukee, WI

APPENDIX P

REMINDER LETTER FOR THREE

ROUND QUESTIONNAIRE

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

Dear Colleague:

Approximately one month ago a I mailed a questionnaire booklet to you on the identification of a model masters degree in nursing for the community-based primary health care nurse practitioner. However, I have not received your rank order responses or recommendations on the proposed education modules and components. If you have not finished the questionnaire, please complete the booklet at your earliest convenience. To expedite the mailing process I have self-addressed and stamped the back of the booklet.

I do hope you will continue with the project. Your input is critical and will make a valuable contribution toward the identification of a model masters degree in nursing.

Thank you for your consideration.

Sincerely,

COOPERATING
UNIFIED DISTRICTS
No. 321-Kaw Valley
No. 335-North Jackson
No. 336-Holton
No. 337-Mayetta
No. 338-Valley Falls
No. 339-Jefferson Co. No.
No. 340-Jefferson West
No. 341-Oskaloosa
No. 342-McLouth
No. 343-Perry
No. 345-Seaman
No. 372-Silver Lake
No. 437-Auburn-Washburn
No. 450-Shawnee Heights
No. 501-Topeka

APPENDIX Q

LETTER OF GRATITUDE

KAW Area
Technical School

5724 SW Huntoon St
Topeka, KS 66604-2199
Ph: 913-273-7140
Fax: 913-273-7080

October 15, 1994

Dear Colleague:

Thank you for your valuable input and assistance on the identification of a model masters program in nursing. I am pleased to announce that a shared vision has been achieved by the panel on the necessary education modules and components to prepare nurse practitioners as community-based primary health care providers.

I am enclosing a copy of the model masters program for your reference. As determined by the panel the education modules and components are listed in rank order based upon the degree of importance. As you review the model's curriculum please consider the components listed last in each module as possible elective courses depending upon the student's academic achievements and clinical expertise.

Congratulations on a job well done!

Sincerely,

COOPERATING
UNIFIED DISTRICTS
No. 321-Kaw Valley
No. 335-North Jackson
No. 336-Holton
No. 337-Mayetta
No. 338-Valley Falls
No. 339-Jefferson Co. No.
No. 340-Jefferson West
No. 341-Oskaloosa
No. 342-McLouth
No. 343-Perry
No. 345-Seaman
No. 372-Silver Lake
No. 437-Auburn-Washburn
No. 450-Shawnee Heights
No. 501-Topeka

VITA

Julie Katherine Putnam

Candidate for the Degree of

Doctor of Education

Thesis: IDENTIFICATION OF A MODEL MASTERS DEGREE IN NURSING FOR THE COMMUNITY-BASED PRIMARY HEALTH CARE NURSE PRACTITIONER

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Topeka, Kansas, May 26, 1952, the daughter of Charlie E. and Marie M. Putnam.

Education: Graduated from Topeka West High School, Topeka, Kansas, 1970; received nursing diploma from Stormont-Vail School of Nursing, Topeka, Kansas, 1973; received a Bachelor of Arts in Health Care Management from Ottawa University, Ottawa, Kansas, 1979; received Master of Science degree in Adult and Occupational Education from Kansas State University, Manhattan, Kansas, 1985; received an Educational Specialist degree in Industrial Education from Pittsburg State University, Pittsburg Kansas, 1990; Completed requirements for the Doctor of Education Degree in Occupational and Adult Education, with an emphasis in Adult and Continuing Education, at Oklahoma State University, Stillwater, Oklahoma, December, 1994.

Professional Experience: Registered nurse, In-patient Medical-Surgical, Stormont-Vail Regional Medical Center, Topeka, Kansas, July, 1973 to July 1974; Registered nurse, In-patient Emergency Department, St. Francis Hospital and Medical Center, Topeka, Kansas, July 1974 to May 1975; Nurse Associate, Gastroenterology, Internal Medicine, P.A., Topeka, June 1975 to May 1985; Manager of Private Review, Kansas Foundation for Medical Care, Topeka, Kansas, May 1985 to January 1989; Instructor, Practical Nursing, KAW Area Technical School, Topeka, Kansas, January 1989 to present; Adjunct faculty Allen County Community College and Highland Community College, August 1994 to present time.

Professional Organizations: American Vocational Association; Honor Society of Phi Kappa Phi; National Education Association; Sigma Theta Tau International Honor Society.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 02-25-94 **IRB#:** ED-94-067

Proposal Title: IDENTIFICATION OF A MODEL MASTERS DEGREE IN NURSING FOR THE COMMUNITY BASED PRIMARY CARE NURSE PRACTITIONER

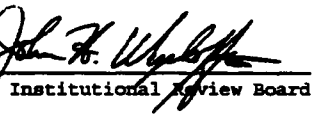
Principal Investigator(s): Dr. Robert E. Nolan, Julie K. Putnam

Reviewed and Processed as: Exempt

Approval Status Recommended by Reviewer(s): Approved

APPROVAL STATUS SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD AT NEXT MEETING.
APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD APPROVAL. ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval are as follows:

Signature:  Date: February 28, 1994

Chair of Institutional Review Board