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## PROGRAM PLANNING IN PERSPECTIVE

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The United States faces complex health challenges in the next decade and into the twenty-first century. The times demand a new mandate for health research that emphasizes optimizing health, preventing illness and disability, and enhancing the quality as well as the quantity of life as a new paradigm for health care. Innovative changes in health care and the development of cost-effective systems for such care will be essential to meet the needs of society. These needs derive from: an expanding older population; increasing poverty, particularly affecting children; diminishing family care and support structures; massive restructuring of jobs to require more use of technology and less physical activity; and increasing immigration from diverse cultures.

### **Nursing Research**

Nursing research is an integral part of the scientific enterprise of improving the nation's health. Research on self-care, on care of dependents, and on client/patient care in terms of underlying biophysiological and sociobehavioral mechanisms and a focus on promoting health of individuals and families is critical. Knowledge about these mechanisms which are intricately involved in health and illness, as well as individual and family responses under such conditions, is a national imperative critical to the present and future well-being of the American people.

Nursing is the discipline associated with the science and art of care-giving. Although all health professionals care about those to whom they provide services, actual acts of care-giving in health and illness are most frequently performed by nurses. The nursing discipline grew out of public demand for educated, formal caregivers devoted to the public good. Throughout its history nursing has espoused the idea that care-giving in health and illness must be organized around individuals, families, and communities, rather than diseases (Lynaugh & Fagin, 1988). Nursing also recognizes the effect of culture in shaping the definition of health and illness and interpreting human responses to physiological and behavioral change. In an era when care needs are intensifying at both ends of the lifespan, nursing care must be firmly grounded in scientific knowledge. Care must also be delivered within systems validated by nursing systems research as providing quality care and achieving positive, cost-effective outcomes for individuals, families, and communities.

### **The Need for a Long-Range Plan**

The National Advisory Council for Nursing Research (NACNR) and National Center for Nursing Research (NCNR) staff are committed to developing the programs necessary to achieve two major goals: promoting excellence in the science underlying nursing practice and facilitating nursing research nationally. Several basic assumptions underlie the pursuit of these goals and the strategic planning processes required to attain them:

- Strategic planning must be an integral part of the ongoing activities of the NCNR, complementary to but not competitive with program implementation.
- The nursing science community must continue to be directly involved in identifying future research priorities and initiatives.
- Planning for the conduct of both basic research and clinical research is of high priority for the continuing development of science for nursing practice.
- Research training, career development, and research support must be viewed as synergistic in optimizing scientific advances within the discipline of nursing.

This chapter describes the long-range plan of the NCNR, the development of the National Nursing Research Agenda (NNRA), the intended purposes of the NNRA, and the historical and professional context within which it was developed. Long-term planning for nursing research was initially shaped by the establishment of a visible, stable federal structure for the development of the research and research training programs of the profession--the NCNR. Current strategic planning seeks to provide focus to these rapidly developing nursing research and research training programs. The goals of such a strategic plan are twofold: to facilitate excellence in nursing science and create a national environment to support knowledge development for nursing. The burgeoning magnitude of problems of self-care, care of family members, and provision of appropriate professional nursing care to diverse populations mandates excellence and the highest degree of integrity in scientific pursuits. Excellent science can only be nurtured in an environment where the worth of care research is recognized, where "state-of-the-art" clinical and laboratory facilities are available to nurse scientists, and participation in collaborative research is the norm. The remainder of this volume outlines the processes used to develop the NNRA (Chapter 2), plan for its implementation (Chapter 3), as well as evaluate its effectiveness (Chapter 4).

## Establishment of the National Center for Nursing Research

The practice of the profession is complex and diverse; it requires accurate, reliable information from which to improve the health care provided to society. Obtaining desired outcomes in nursing practice mandates the development of a body of knowledge based on scientific inquiry. Developing such a body of knowledge requires the support of a stable federal infrastructure. A major goal of the nursing profession in the United States has been to establish the research programs of the profession in a visible structure within the "mainstream of health science" that would facilitate the growth of a body of knowledge for nursing practice.

The National Center for Nursing Research (NCNR) was created on April 18, 1986, at the National Institutes of Health (NIH) by Secretary Otis R. Bowen of the Department of Health and Human Services (DHHS) to provide the visible federal structure within the mainstream of biomedical and behavioral research needed to facilitate research for the practice of nursing and patient care. The NCNR was charged under the Health Research Extension Act of 1985, Public Law 99-158 with "the conduct and support of, and dissemination of information respecting, basic and clinical nursing research, training, and other programs in patient care research."

### HEALTH RESEARCH EXTENSION ACT ACT OF 1985

PUBLIC LAW 99-158—NOV. 20, 1985

99 STAT. 867

#### "Subpart 3—National Center for Nursing Research

##### "PURPOSE OF THE CENTER

"Sec. 483. The general purpose of the National Center for Nursing Research (hereafter in this subpart referred to as the 'Center') is the conduct and support of, and dissemination of information respecting, basic and clinical nursing research, training, and other programs in patient care research.

42 USC 287c.

##### "SPECIFIC AUTHORITIES

"Sec. 484. To carry out section 483, the Director of the Center may provide research training and instruction and establish, in the Center and other nonprofit institutions, research traineeships and fellowships in the study and investigation of the prevention of disease, health promotion, and the nursing care of individuals with and the families of individuals with acute and chronic illnesses. The Director of the Center may provide individuals receiving such training and instruction or such traineeships or fellowships (including those

Fellowships.  
Supp.  
42 USC 287c-1.

*The legislation which established the National Center for Nursing Research in 1985.*

Although nursing research and research training had been supported as a federal research program since 1955, these programs were administered until 1986 by an agency with a mandate focused on human resources and educational issues of the health care professions: the Division of Nursing within the Bureau of Health Professions in the Health Resources and Services Administration of the United States Public Health Service (USPHS). In order to enhance the development of nursing research within the mainstream of other health-related sciences, the NCNR was established within NIH.

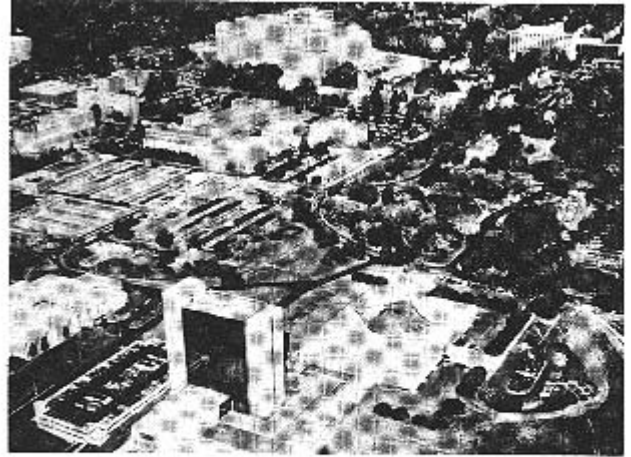
### **Historical Perspective**

In the early years of federal support, before the establishment of the NCNR, several major Division of Nursing initiatives facilitated the development of knowledge for nursing. One initiative focused on preparing a cadre of nurse researchers with earned doctorates to conduct programs of research and develop doctoral programs in nursing. Several scholarship programs were offered to prepare nurse researchers: the individual Special Nurse Research Fellowship, the Nurse Scientist Graduate Training program for institutions, and later the individual and institutional predoctoral and postdoctoral awards available through the National Research Service Award (NRSA) legislation.

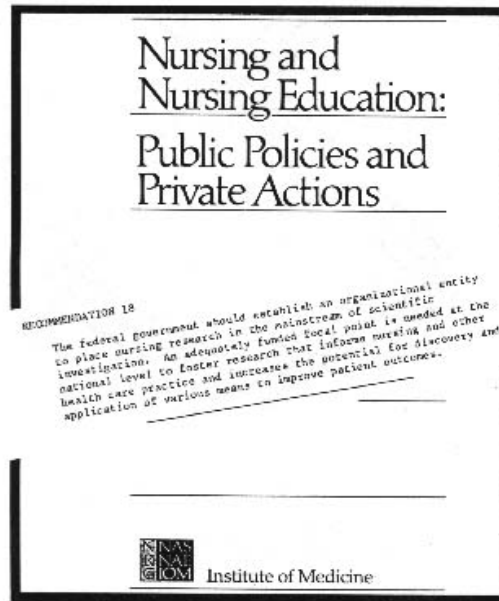
The second initiative focused on the development of nursing school faculty and infrastructures to facilitate research within the extramural academic and health service institutions. Two programs have been lauded for their assistance, the Faculty Research Development Grants and the subsequent Research Development Grants. The first was created to provide resources for faculty development in conducting research and the second facilitated the conduct of small, preliminary studies. Under both of these programs, institutions could establish the structures needed to encourage research and promote development of future major research programs. For example, a number of schools developed "offices" or "centers" of research whose purpose was to assist faculty and students in conducting studies and obtaining resources to support investigative programs.

A third initiative supported nursing research through research grants awarded to investigators in the extramural academic and clinical agencies. Originally, the focus of these studies was diverse, but beginning in the 1970s, a strong orientation evolved for studying the clinical problems and issues in nursing practice.

In the 1983 study *Nursing and Nursing Education: Public Policies and Private Actions* (Institute of Medicine [IOM], 1983), the National Academy of Science recommended the creation of a "visible structure" in the mainstream of health-related research within the United States Government for the facilitation of nursing research. The ultimate outcome of a unified commitment by the nursing profession to implement the recommendation was the establishment of the NCNR at the NIH.



*The main campus of the National Institutes of Health in Bethesda. When NCNR was first established, staff were housed in a small suite of offices in the Lister Hill Building (the tall building in the foreground).*

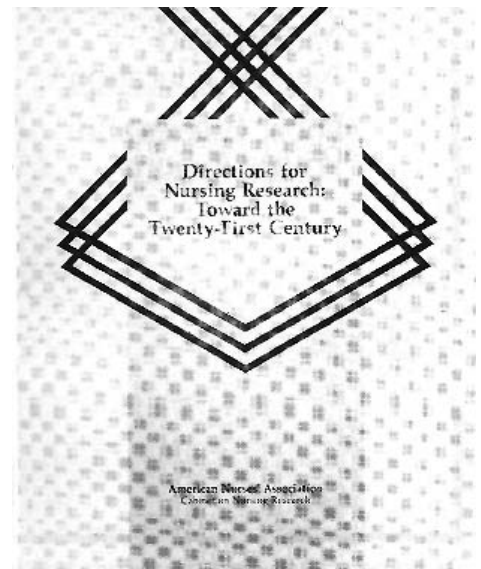


*The Institute of Medicine recommendation which led to the establishment of the National Center for Nursing Research.*

A number of diverse forces led to the establishment of the NCNR within the mainstream of health care science. In addition to the recommendation from the National Academy of Science Institute of Medicine (IOM) study in 1983, several professional and political factors facilitated establishment of the NCNR. From a developmental perspective, the profession had a solid cadre of prepared investigators, a moderate number of research-intensive doctoral programs, and active regional and national scientific communities. From a societal perspective, the nursing profession was identifying major areas of research that presented scientific opportunities of interest to the larger health care community, the Congress, and the public.

In the words of the American Nurses Association (ANA) statement on Directions for Nursing Research, the major thrust of nursing research is to

promote health, well-being, and ability to care for oneself among all age, social, and cultural groups; minimize or prevent behaviorally and environmentally induced health problems that compromise the quality of life and reduce productivity; minimize the negative effects of new health technologies on the adaptive abilities of individuals and families experiencing acute or chronic health problems; ensure that the care needs of particularly vulnerable groups, such as the elderly, children with congenital health problems, individuals from diverse cultures, the mentally ill, and the poor, are met in effective and acceptable ways; ... ensure that principles of ethics guide nursing research; ... design and evaluate alternative models for delivering health care and for administering health care systems so that nurses will be able to balance high quality and cost-effectiveness in meeting the nursing needs of identified populations (ANA, 1985, pp. 3-4).



*The Cabinet on Nursing Research of the American Nurses Association developed its plan for the future.*

To extend the profession's research programs and respond to scientific opportunities, an infusion of resources was required for the support of research and research training. The infusion would need a more visible structure and process legitimating and underwriting nursing research endeavors.

Concurrently, favorable political factors were converging to support the establishment of the NCNR. Congressional interest was generated for the type of research conducted by nurses--clinically relevant research affecting the care of people who are acutely or chronically ill, as well as the promotion of good health. Nursing research complemented biomedical discoveries through emphasizing individual and familial response to health and illness. Congress also wanted to see if enhancing nursing research would help resolve the severe nursing shortage and shrinking enrollments in schools of nursing occurring in 1986-87. Nurse scientists linked the establishment of the NCNR with the increased visibility of the scientific role of the nurse, which would have a positive impact on the public image of the nurse and thus enhance recruitment for nursing. Furthermore, expansion of the research programs in nursing, a predominantly female profession, would lead to an increase in women scientists.

Several objectives were expected as a result of creating a separate federal structure for nursing research. First, creating an organizational entity at the NIH would bring nursing research into the mainstream where other biomedical and behavioral research is generated and supported. The creation of NCNR would facilitate the collaboration of nurse scientists and colleagues from other disciplines, both across extramural and intramural programs at NIH through cooperation among the institutes, centers, and divisions, and across schools and departments at universities and health care institutions. Second, the knowledge base for nursing would benefit from the contact with and investigations of other health sciences and would be more apt to be understood and available for use by other disciplines. Third, nursing, with its emphasis on health promotion and behavioral research, would enrich other disciplines' scientific programs while drawing on the strengths in biomedical research to enhance the profession's exploration and understanding of the biological factors underlying nursing practice. Fourth, being a part of NIH permitted the use of additional NIH research and research training mechanisms to facilitate the evolution of knowledge for nursing.

The growth of the NCNR during the early formative years (1986-1991) was substantial. The extramural and intramural NCNR programs were developed with major expansion of the research support and research training/career development opportunities made available to the nursing community.

## Challenges for Nursing Research

The long-range plan for the NCNR has been responsive to several challenges confronting the nursing research community in general and the NCNR in particular. Three major scientific challenges face the NCNR and the nursing community in attaining the goal of excellence in the science underlying nursing practice. These challenges are: 1) the development of depth in nursing science; 2) the enhancement of cutting-edge scientific capabilities, and 3) the dissemination of the evolving body of research findings for timely use (Hinshaw, 1988, 1990).

### Depth in Science for Nursing

Developing depth in the science is critical for enhancing excellence in the scientific base of the discipline. Several strategies are important to achieve depth in nursing research: 1) delineating nursing research priorities for targeting resources, 2) encouraging the development of research programs for individual investigators, 3) building critical masses of scientists working in the same or similar areas of study, and 4) developing basic research programs for nursing.

***Delineating Nursing Research Priorities.*** Developing clusters of studies requires focusing investigator endeavors and research resources in selected substantive areas. These selected areas need to be defined by the nursing community based on the major health care needs of society and the likelihood of nursing research making a timely, substantive contribution to meeting those needs. The Conference on Research Priorities (CORP) process (see Chapter 2) was used to identify substantive areas for the National Nursing Research Agenda (NNRA) to guide program initiatives. Delineating nursing research priorities is a critical aspect of building depth in nursing science because the process helps focus research resources and scientific endeavors.

***Encouraging Individual Investigator Research Programs.*** An increasing cadre of nurse investigators needs to be socialized to the critical importance of developing individual investigator programs of research. Such programs constitute a continuing line of study consisting of multiple interlocking investigations that build on each other. Nurse investigators need encouragement to view science as a career commitment and as a multiphase process that begins in doctoral or postdoctoral study and continues for a period of years, during which a number of related investigations are conducted that constitute an individual research program. Nurse scientists must be encouraged to build on their prior work, to replicate and extend that work, and to explore areas related to their central line of investigation. Individual investigators can thus make a substantial contribution to depth in a particular area of knowledge and develop the expertise to ask probing questions that expand the evolving base of research findings.

***Building Critical Masses of Scientists.*** Still another strategy for building depth in science is facilitating a critical mass of investigators functioning in the same area of research either within one site or across several sites. Nurse scientists are encouraged to build on each other's work and view findings from multiple perspectives in a substantive field of study. For example, program announcements encouraging the submission of applications for specialized or exploratory center grants potentiate the collaboration of a critical mass of scientists focused on a central theme of study. Formation of scientific communities and formal networks for nurse scientists and those from other disciplines who share interest in one substantive area promotes excellence in nursing science by providing a structure for scholarly dialogue essential to the development of depth in knowledge.

***Developing Basic Research Initiatives.*** Innovative ways of understanding and conceptualizing biological and behavioral responses are fundamental to knowledge for nursing. Funding basic research into the biological and behavioral mechanisms underlying such human responses in health and illness is vital for building a strong knowledge base for nursing practice. The interface between biological and behavioral phenomena and the interactive dynamics that affect health and illness experience merit special attention. One thrust of the NCNR

that cuts across many substantive areas must be support of basic research and research training specific to problems/issues evolving from nursing practice.

### **"Cutting Edge" of Science**

Several strategies can enable nurse scientists to be on the "cutting edge" in their investigative endeavors: 1) commitment to a career trajectory for research training, 2) conduct of collaborative interdisciplinary research, and 3) access to and use of "state-of-the-art" laboratories as well as research instrumentation and methods.

***Career Trajectory for Research Training.*** To develop and sustain a community of nurse researchers committed to excellence in science demands that the profession adopt a career orientation to research training and development. To remain in the forefront of scientific endeavors requires continual updating and retraining in substantive content and methodological strategies. A trajectory of research training and career development awards facilitates the scientific efforts of a discipline's investigators. Award mechanisms are needed to provide continued support for predoctoral and postdoctoral training as well as midcareer development opportunities. In addition, senior scientists need opportunities to acquire knowledge and skills that differ somewhat from those needed in their prior scientific endeavors.

***Collaborative Interdisciplinary Research.*** Collaborative research with investigators from other institutions is an interdisciplinary approach to building knowledge that enhances scientific depth and enables scientists to remain on the frontier of their research. Interacting with investigators with multiple backgrounds merges expertise and provides the diverse perspectives needed to be on the forefront of knowledge development about complex health care questions.

***State-of-the-Art Laboratories and Instrumentation.*** Investigators will not be able to shape or remain on the "cutting edge" of science without access to "state-of-the-art" laboratories, instrumentation, and methods. Assessment and updating of nursing research equipment and facilities should be an integral component of ongoing efforts by scientists and the federal agencies to plan for the research facilities needed within universities and health service programs to provide a strong infrastructure for health research. Renovation and expansion of research facilities as well as timely replacement of biological and behavioral instrumentation are critical for the conduct of nursing research.

### **Dissemination and Use of Research Findings**

The dissemination of nursing research results has already yielded many health benefits and cost savings for the public. For example, endotracheal suctioning protocols have been developed that avoid highly undesirable side effects such as hypoxia, mucosal trauma, and bronchospasm. Inspiratory muscle training protocols have improved the functional status of the chronically ill, and non-nutritive sucking regimens for preterm infants have augmented digestion and weight gain, resulting in developmental support and earlier hospital discharge.

Although scientific advances are apparent within nursing research, the interval between discovery and utilization in practice must be shortened to ensure timely incorporation of findings into the provision of care. To be supported by NCNR, proposals for basic and clinical research programs must have the potential ultimately to improve patient care and guide practice. Nursing must develop efficient processes for achieving consensus on care recommendations and marketing research-based information to practitioners and consumers. The breadth of the discipline's research and the diversity of the information to be disseminated provide challenges for the future.

Nurses with advanced educational preparation engaged in clinical practice have an intimate understanding of many kinds of health problems. Thus, formalized opportunities for linkages among nurse scientists and nurse clinicians are essential to facilitate problem identification and transfer of knowledge from research to patient/client care. Strategic collaboration and cooperation among nurse clinicians and nurse scientists will

enrich the emerging body of knowledge concerning clinical practice and will assist in minimizing common problems in clinical studies.

## **Long-Range Plan Objectives**

As mentioned earlier, the goals of the NCNR's long-range plan identified by the strategic planning process are two-fold: 1) to create a national environment supportive of knowledge development for nursing and 2) to identify mechanisms to facilitate excellence in nursing science. Initially, five major objectives were chosen to implement these goals:

- Develop a National Nursing Research Agenda.
- Establish a career trajectory for research training and career development.
- Facilitate collaboration with other scientific disciplines.
- Develop an intramural research program.
- Develop an international nursing research program.

The five objectives reflect the NCNR staff and NACNR members' commitment to the goals of facilitating excellence in science and creating a national environment for the support of research and research training for nursing. They guide the planning for NCNR programs to achieve the nursing research goals and confront the challenges cited earlier.

### **National Nursing Research Agenda**

The National Nursing Research Agenda (NNRA) is the set of scientific priorities identified by the nursing scientific community on which federal resources are focused, thus building depth in the knowledge about critical health issues that nursing can influence. Program initiatives of the NCNR reflect these scientific priorities.

The first phase (see chart on next page) of the NNRA was developed through strategic planning processes implemented at the Conference on Research Priorities in Nursing Science (CORP) in January 1988, resulting in the identification of seven priority areas targeted for development of major research initiatives. These are: 1) Low Birthweight: Mothers and Infants; 2) HIV Infection: Prevention and Care; 3) Long-Term Care for Older Adults; 4) Symptom Management: Pain; 5) Nursing Informatics: Enhancing Patient Care; 6) Health Promotion for Older Children and Adolescents; and 7) Technology Dependency Across the Lifespan. The NNRA provides guidance to the NCNR as program initiatives are generated for research and research training. The priorities and related scientific progress will be assessed periodically. A mechanism for reviewing and updating research priorities is an integral component of the strategic planning process.

### **Trajectory for Research Training**

The NCNR is committed to promoting the development of a career trajectory for research training of nurse investigators (NCNR, 1988). In 1985, the biennial report of the National Academy of Sciences (NAS, 1985) Committee on National Needs for Biomedical and Behavioral Research Personnel recommended that 320 nurse scientists be federally supported for predoctoral research training by 1990, of which 15% or more would eventually go on to postdoctoral study. Strategic planning for the NCNR in regard to research training is based on the philosophical premise that such training is a career commitment. Identifying various funding mechanisms that provide for initial training and for later development of scholarly capabilities to ensure a cadre of scientists at the "cutting edge" of nursing research is a major concern of the NACNR members, NCNR staff, and the nurse scientist community. The following components will be specified in greater detail as planning progresses: 1) the adoption of a trajectory for research training and career development, 2) a planned approach for increasing the total number of predoctoral and postdoctoral trainees under both the NRSA individual



fellowships and institutional mechanisms, 3) a systematic plan for increasing the number of postdoctoral trainees and fellows in relationship to the total number, and 4) an organized approach for increasing the number of NRSA institutional awards to schools/colleges of nursing.

**National Nursing Research Agenda: Overview of Phase I**

Panel	Fiscal Years	1989	1990	1991	1992	1993	1994	1995
A (LBW)	CONFERNCE	Panel A	Report PAs/RFAs Funding	Funding				
B (HIV)		Panel B	Report PAs/RFAs Funding	Funding				
C (LTC)			Panel C	Report PAs/RFAs Funding	Funding	Funding		
D (Pain)				Panel D	Report PAs/RFAs	Funding	Funding	
E (IS)				Panel E	Report PAs/RFAs	Funding	Funding	
F (HP)					Panel F Report	Report PAs/RFAs	Funding	
G* (TD)						Panel G	Report PAs/RFAs Funding	Funding

\*Implementation of this priority has been deferred indefinitely.

**Career Development Initiatives.** To develop depth in science through the efforts of highly qualified investigators requires periodic retraining of the nation's nurse scientists. The NCNR has instituted programs to encourage the use of Academic Investigator Awards (AIA), and Clinical Investigator Awards (CIA) to enhance the expertise of researchers already in the field. The AIA is designed to allow promising nursing faculty time away from administrative and teaching duties to establish their research programs and mature into independent investigators. The CIA provides support for nurse investigators holding a doctorate or postdoctorate to work under a sponsor at an NIH-supported General Clinical Research Center (GCRC) or other NIH-supported centers. Part of the strategic planning for NCNR involves projecting the numbers of AIAs and CIAs needed in the future to ensure quality in clinical nursing research endeavors.

**Collaboration: Multidisciplinary and Intradisciplinary**

The NCNR has an excellent record of collaborative endeavors with other institutes, centers, and divisions (ICDs) of NIH. Cross-ICD initiatives encourage collaboration among scientists in a wide range of disciplines to

explore areas of health care at a level of complexity impossible within a single discipline. Further planning will continue to address cross-ICD initiatives and a timetable for their exploration and implementation. Planning strategies will remain flexible enough for pursuing collaboration opportunities that emerge in the future.

Intradisciplinary research focuses on collaboration among nurse clinicians with advanced educational preparation and nurse scientists to enrich the body of knowledge underlying clinical practice. Intradisciplinary research enhances the identification and transfer of knowledge from research settings to patient/client care and merges clinical and research experience, which enhances both the clinical relevance and scientific rigors of the evolving knowledge base for nursing practice.

A major objective for the NCNR Centers Program is to promote basic and clinical research of interest to nursing within an interdisciplinary context. Centers of excellence bring together a number of researchers with common investigative goals. The Centers Program has the potential for developing depth in nursing research as well as linkages among clinical practice, clinical research, and basic biophysiological/ behavioral research for the improvement of patient care. A number of institutions have cadres of experienced nurse investigators and established multi-disciplinary networks in place that a center can bring together to build science through interdisciplinary research activity. Two types of awards have been implemented: Specialized Centers (P50) and Exploratory Centers (P20). The Specialized Centers reflect interdisciplinary depth in a specified scientific area that includes a critical mass of senior nurse scientists; the center funds synergistic projects with a common focus and consolidates support activities. Exploratory Centers Grants (P20) encourage institutions where a limited amount of nursing research is ongoing and opportunities exist to link into interdisciplinary strengths of that university to develop a focused research program in a specific area.

### **Intramural Program Development**

The NCNR's initial intramural research efforts are targeted at individuals infected with the Human Immunodeficiency Virus (HIV) who are currently receiving care at the NIH Warren Grant Magnuson Clinical Center (Clinical Center) through participation in studies conducted by investigators of the National Institute for Allergy and Infectious Diseases (NIAID). The Collaborative Intramural Program for HIV infection (CIPHIV) was initiated by NCNR in 1989 in cooperation with NIAID. HIV infection, including Acquired Immunodeficiency Syndrome (AIDS), was identified in 1988 as a part of the NCNR's National Nursing Research Agenda as a health problem of the highest priority for nursing research and is the primary aim of the NCNR's intramural program. The goal is to increase understanding of and develop nursing interventions for health problems particularly prevalent among or troublesome to HIV-infected individuals, their families, or their caregivers. The ultimate goal of this research effort is to minimize dysfunction and suffering due to neuropsychological sequelae of HIV infection, such as unintentional weight loss, decreased appetite, or other nutritional disorders; diarrhea; fatigue; oral complications; depression; or dementia. Studies that focus on quality of life among individuals with HIV infection are also an important intramural focus. Quality of life is especially important while HIV infection remains incurable and new treatments are being discovered that prolong life. Such efforts contribute to diminishing the cost, both economic and personal, of HIV infection and its medical management (Synopsis: Collaborative Intramural Program for Human Immunodeficiency Virus (HIV) Infection [NCNR, 1989a]). The NCNR may expand its research efforts regarding HIV to include investigations of populations not being studied by NIAID, which would require recruitment of subjects primarily for NCNR.



*Development of an intramural research program.*

In the future, NCNR will expand the intramural program to collaborate with other NIH ICDs on other research priorities. The interdisciplinary sharing of a research infrastructure and study subjects and/or data is cost-effective, minimizes the burden on subjects by sharing data, supports secondary analysis of the comprehensive data sets, and

promotes serendipitous findings from linking data collected for different purposes from the same population. In time, the NCNR intramural laboratories may serve an important training function for postdoctoral, mid-career, and senior nurse scientists.

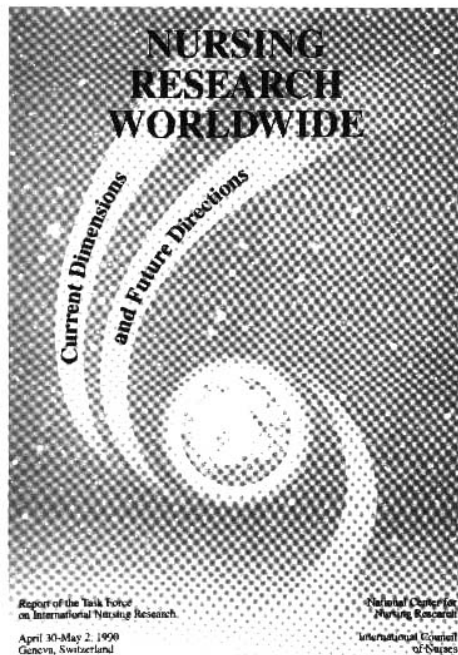
The Clinical Center is the facility used for intramural patient research at NIH. The NCNR continuously communicates and fully cooperates with the Department of Nursing at the Clinical Center on matters pertaining to nursing research on the NIH campus. For instance, collaboration with the Department of Nursing will be crucial to the success of the intramural program's AIDS research focused on care issues. In addition, innovative models for nursing research activities will be developed on the NIH campus that can be adapted to extramural settings.

A major challenge for the NCNR within the next several years is to develop the concept of an intramural program "without walls." Expansion beyond the Clinical Center to other acute care facilities and community agencies of varying types would allow the NCNR to evaluate interventions creatively across settings and address system delivery issues for health promotion, disease prevention, and care of chronically ill and vulnerable populations.

### **International Nursing Research Program**

Other countries in addition to the United States are focusing on the development of priorities for nursing research. Parallel nursing science initiatives in countries throughout the world offer multiple opportunities for cooperative planning and research collaboration.

With the discipline's emphasis on the cultural aspects of nursing care, an international research program for the NCNR seems highly appropriate. Such a program would allow access to populations from diverse cultures for the generation and testing of knowledge relevant to health and nursing from a variety of perspectives.



*Developing international nursing research networks.*

The globalization of nursing research initiatives would provide a rich base of information critical to understanding the unique biophysiological, psychosocial, and behavioral patterns of the world's populations. Uniqueness as well as similarities in human responses in health and illness in diverse cultures would provide a

knowledge base for effective health care actions. Exploration of mechanisms for capitalizing on promising international research opportunities merits consideration.

## **National Support for Nursing Research**

Multiple sources of support for conducting nursing research interface with the federal resources administered by the NCNR and other government agencies. Institutional and professional sources of support offer opportunities for grants for pilot and small-scale studies. Several private foundations offer large-scale support for targeted programs of interest to the specific foundation.

### **Institutional Support for Research**

Institutional support for nursing research is provided through the schools or colleges of nursing in research-oriented universities and colleges as well as through departments of nursing in research-focused acute care and community agencies. Increasingly, performance evaluation criteria are requiring research and scholarship activities by all faculty and nurses in advanced practice. The support generally consists of small grants, statistical consulting, access to computing facilities, information on sources of funding, and peer review through the research offices of the university or corporate offices of health service agencies. The grant monies are usually awarded through competitive processes and peer review of submitted applications. These grants often fund the pilot studies needed to compete more successfully at the federal level for larger-scale investigations.

### **Professional Organization Support for Research**

Increasing numbers of nursing professional organizations, including specialty practice organizations, have small grant programs for research support. For example, the foundation arm of the American Nurses Association (ANA), the American Nurses Foundation (ANF); Sigma Theta Tau, International (STTI), the honor society for nursing; and the Oncology Nurses Society (ONS) sponsor small grant programs. The awards are made yearly through a competing application and review process. The ANF has expanded the number of awards by encouraging other organizations and corporations to sponsor designated small grants that are administered through the ANF grant program (e.g., the Association of Operating Room Nurses [AORN]). The ANF also has a program to support a distinguished scholar to conduct research with health care policy implications.

A number of the specialty organizations of the nursing profession sponsor small grants and/or scholarships for advanced clinical education and research training. For example, the American Association of Critical Care Nurses systematically sponsors a cluster of pilot studies in an area of high priority to the association such as endotracheal suctioning of extremely ill patients in intensive care units. Other associations, such as the American Association of Neuroscience Nurses and the Association of Rehabilitation Nurses, also offer small grants to support research and research training. The studies conducted with the support of the general and specialty organizations are often subsequently submitted for enhanced federal funding by the NCNR or other agencies.

### **Private Foundation Support for Research**

Private foundations serve as another source of support for nursing research. Various major private foundations have focused on specific issues of concern in preparing clinical scientists, for example, the Clinical Scholars program of the Robert Wood Johnson Foundation (RWJ). Nursing research in relation to specific societal issues such as the nursing shortage has also been supported by major foundations such as the Pew Memorial Trust, RWJ Foundation, Kellogg Foundation, and the Commonwealth Fund. Smaller foundations and disease-specific associations are also a source for pilot or small-scale funding of nursing research related to the purposes of that foundation, such as March of Dimes, American Heart Association, Arthritis Association, Alzheimer's Association.

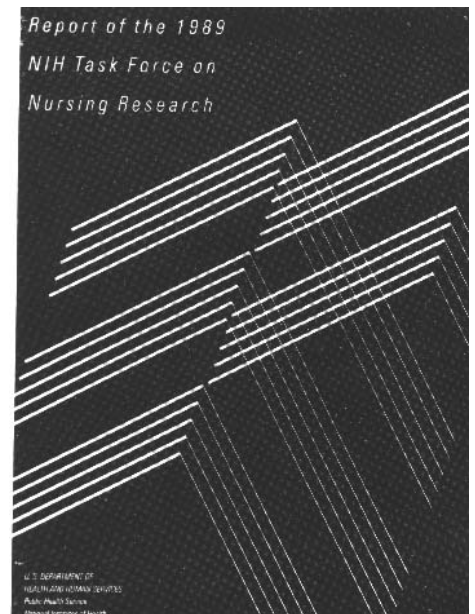
Future opportunities will be sought for coordinating research and dissemination programs of major private foundations, the NCNR, and the USPHS Division of Nursing, as was done with programs focusing upon "Innovative Practice Models" for testing organizational changes in order to enhance nurse retention and improve the quality of care in acute care agencies. Such collaboration is beneficial with issues of common interest.

### **Federal Support for Research**

Federal support of nursing research is available through multiple agency programs and initiatives. The NIH Task Force on Nursing Research showed that a number of the ICDs are supporting nursing research that falls within their areas of interest (NCNR, 1989b). Moreover, the report outlined a number of recommendations encouraging further opportunities for research support and research training for nurse scientists within the various ICDs. Nursing research is stronger for having been supported by multiple agencies with common interests, although the NCNR performs a vital function as the focal point and proponent for nursing research. Additional perspectives will strengthen the knowledge base needed for complex nursing practice situations.

### **Summary**

Thus, the establishment of the NCNR was a result of efforts of the national nursing community to have a focus for nursing research within NIH. The NCNR collaborates with the Division of Nursing (HRSA) to establish federal programs to increase nursing's contribution to knowledge and systems of care for health promotion, mitigation of disease and disability, and quality of life. A strategic planning process was used to develop a long-range plan, within the national context of multiple sources of support for nursing research. The strategic planning process has identified three major challenges for nursing research: to develop depth in nursing science, establish environments that nurture "cutting edge" science, and develop mechanisms for dissemination and utilization of research findings. The goals of the long-range plan for NCNR are to 1) create a national environment supportive of knowledge development for nursing and 2) identify mechanisms to facilitate excellence in nursing science. The long-range plan, based upon shared basic assumptions, includes priority setting and updating through the strategic planning process and is being implemented through five strategies. The strategies are:



- The NNRA to clarify research priorities and guide decision making in choosing initiatives to build depth in nursing science.
- *Trajectories for research training and career development* to facilitate commitment to research careers and the development of critical masses of investigators for building depth in nursing science.
- *Intradisciplinary and multidisciplinary collaboration* to facilitate and enhance nurturing environments that recognize the importance and complexity of care research.
- *Intramural research program* to build collaboratively both a nurturing environment for knowledge development with state-of-the-science instrumentation and methods and depth in nursing science through training and research.
- *International nursing research program* to capture opportunities to study caregiving with multiple populations from differing cultures and to participate as a full partner in the global nurse scientist community to build depth in nursing knowledge.

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