EXECUTIVE SUMMARY

Nursing research is an integral part of improving the nation's health as the United States faces such demanding health care challenges as optimizing health, preventing illness and disability, and enhancing the quality of life. Long-term planning for nursing research was initially concerned with the establishment of a visible, stable federal structure for the development of the research and research training programs of the profession -- the National Center for Nursing Research (NCNR), which was established at the National Institutes of Health (NIH) on April 18, 1986. The NCNR provides a focus for the rapidly developing research programs of the nursing community.

Challenges, Goals, and Initiatives

Through its strategic planning process, the NCNR identified three major challenges for nursing research: developing depth in nursing science, establishing environments conducive to "cutting edge" science, and ultimately developing mechanisms for timely dissemination and use of research findings. The first of these challenges, the development of depth in the science for nursing practice, is being achieved through:

- delineating nursing research priorities,
- encouraging individual investigator research programs,
- building critical masses of scientists, and
- developing basic research initiatives.

The second challenge, the enhancement of cutting edge scientific capabilities, is being met by commitment to a research career trajectory, conduct of collaborative interdisciplinary research, and access to state-of-the-art laboratories and instruments. Meeting the third challenge, the timely dissemination and use of research findings, depends upon efficiency in achieving consensus on care recommendations and disseminating research-based health care information to practitioners and consumers.

The long-term goals of the NCNR are to facilitate excellence in science to guide nursing practice and create a national environment to support knowledge for nursing. Five major initiatives were selected to implement these goals:

Develop a National Nursing Research Agenda (NNRA) to set research priorities and to guide the choice of initiatives to build depth in the knowledge base for nursing.

Establish a trajectory for research training and career development to encourage commitment to research careers and the development of critical masses of investigators, thus assuring needed human resources for nursing research.

Facilitate collaboration with other scientific disciplines to address the complexity of research concerning nursing practice.

Develop an intramural research program to conduct basic and clinical research that contributes scientific knowledge for nursing practice, and to provide training opportunities for nurse scientists.

Develop an international nursing research program to study caregiving in culturally diverse populations and to participate in the global nurse scientist community to build depth in knowledge for

nursing. The first of these initiatives, the development of a National Nursing Research Agenda (NNRA) to set priorities and guide resource allocation, is the major focus of this report. The purposes of the NNRA are:

- To provide structure for selecting scientific opportunities and initiatives;
- To promote depth in developing a knowledge base for nursing practice; and
- To provide direction for nursing research within the discipline.

Priority Setting

Development of the NNRA requires close collaboration between and among the NCNR and the National Advisory Council for Nursing Research (NACNR), the nursing research community, and other disciplines both within and outside of NIH and the United States Public Health Service (USPHS). The two most notable examples of such collaboration are the Conferences on Research Priorities (CORP) and the Priority Expert Panels (PEPs). The CORP participants and the NNRA Subcommittee of the NACNR initially identified seven priority areas for nursing research:

Low Birthweight: Mothers and Infants;

HIV Infection: Prevention and Care;

Long-Term Care for Older Adults;

Symptom Management: Pain;

Nursing Informatics: Enhancing Patient Care;

Health Promotion for Older Children and Adolescents;

Technology Dependency Across the Lifespan.

Each broad priority area is developed and further refined by a Priority Expert Panel or PEP, a multi-disciplinary panel of scientists formed around each area. After assessing the state of the science and noting research needs and opportunities in its respective scientific field, such a panel recommends to NCNR more specific issues within the broad priority area on which research efforts and resources should be focused.

Program Development

The recommendations of the panels have formed the basis of program announcements (PAs) and requests for applications (RFAs), thus focusing a portion of NCNR funding on specific priorities. The NNRA Subcommittee of the National Advisory Council for Nursing Research has developed a timetable to place emphasis on the priorities over several years and has disseminated this information to the nursing scientist community.

The priorities developed through the NNRA and elaborated by recommendations of the PEPs are implemented through both the intramural and the extramural programs of the NCNR. The intramural programs support investigations by nurse scientists on the NCNR staff, with an initial focus on the priority, HIV Infection: Prevention and Care. The extramural program, which supports investigations by scientists outside of NIH, is organized in three research branches: Health Promotion/Disease

Prevention, Acute and Chronic Illness, and Nursing Systems, and focuses on all seven of the research priorities.

For research projects, the NCNR uses an array of mechanisms to fund different types of programs for diverse applicants. Some, such as FIRST Awards, are designed for beginning researchers; others, for example R01 research project grants, are most appropriate for more experienced scientists; and yet others, such as research centers, are suitable for groups of scientists to collaboratively focus their efforts on a common and complex area of science.

NCNR extramural support is based on the belief that achieving scientific excellence requires a commitment to research training and career development across the entire career of a nurse scientist. NCNR awards in the areas of research training, career development, and research are designed to form a continuum of support potentially covering a large part of an individual's research career. In the area of research training, the National Research Service Awards (NRSAs) enable scientists to be trained to conduct independent nursing research and to collaborate in interdisciplinary research through individual and institutional fellowships at various educational levels. Career development awards allow nurse scientists to enhance their research careers through additional research experience while reducing their teaching and clinical workloads.

Information about NNRA priorities and extramural research initiatives are disseminated informally through multiple presentations and publications, and formally through the NIH Guide for Grants and Contracts. All competing applications are received by the NIH Division of Research Grants, whose staff refer applications for two crucial reviews. The first review is for scientific merit, usually by the Nursing Research Study Section, the NCNR Nursing Science Review Committee, or a specially constituted ad hoc review panel. The second is by the NCNR's National Advisory Council for Nursing Research or the NCNR Executive Review Group.

Research funded by NCNR reflects both the priorities set in its long-range plan and the creativity of nursing research scientists. The processes described in this report for implementing the NNRA through NCNR-funded research encourage and develop collaboration between NCNR staff and the nursing research community on the critical issues facing society, health care, and nursing.

Program Evaluation

From its inception, the NNRA has been guided by a continual process of evaluation, both formative (ongoing) and summative (outcome). The formative evaluation of the NNRA provides feedback on the structure and processes of setting the agenda and its implementation. The summative evaluation analyzes the extent to which NNRA objectives are being met.

Both types of evaluation use a range of data from a variety of sources, such as minutes and agendas, federal reports, surveys of the scientific community, and external studies. These data are collected through standard methods and organized into inputs, processes, and outcomes. The formative evaluation assesses minutes, agendas, and participant interviews to analyze the timing, resources, and flow of events, as well as the effectiveness of these events in achieving the NNRA objectives. The summative evaluation addresses such issues as funding rates for NNRA priorities and monitors research program development within each NNRA priority. The questions identified for the summative evaluation include critical science indicators. These indicators reflect the degree to which the science emanating from the NNRA is cutting edge, the existence of a critical mass of scientists in similar areas of research, and the application of the knowledge to patient outcomes. The evaluation process also includes external examination of NNRA implementation through additional priority-setting conferences. External evaluators for the NNRA include representatives from other scientific disciplines, other components of NIH, and the nursing research community.

The results of the NNRA evaluation will help define the status, needs, and future directions of nursing research and NCNR programs, as well as the processes by which knowledge for nursing practice can be generated and supported. This information is vital for long-range planning.

Summary

This volume provides the context for understanding the nursing research priorities of the NNRA which is designed to build depth in the science underlying nursing practice. The long-term plan guides the development of NCNR's programs which are designed to strengthen nursing practice.