NINR20TH ANNIVERSARY

# NINR FOCUS: SELF-MANAGEMENT

one in a series of focus papers on research directions and NINR-funded research advances

The aging American population has tremendous implications for our health care system. Escalating long-term care costs, as well as the understandable desire of many elderly to remain independent, will require an increasing number of elderly Americans to manage their own symptoms of chronic illnesses. NINR-funded nurse scientists are developing new methods for improving self-management of disease and for improving adherence to prescribed treatment regimens. NINR's research into better, cost-effective self-management techniques could allow millions of elderly Americans to enjoy a better quality of life.

## ABOUT THE NINR

Established in 1986 as the National Center for Nursing Research and redesignated as an Institute in 1993, the National Institute of Nursing Research (NINR) supports clinical and basic research to establish a scientific basis for the care of individuals across the life span. NINR-supported research seeks to improve the management of patients during illness and recovery, reduce the risks for disease and disability, promote healthy lifestyles, and improve the clinical settings in which care is provided, including addressing problems encountered by families and caregivers. NINR also emphasizes the special needs of at-risk and underserved populations.

The strength of NINR throughout its history has been the talented and dedicated nurse researchers who have helped develop nursing science. Nurse researchers are the scientific vanguard of the largest profession in the health-care delivery system. NINR interacts with virtually all components of the National Institutes of Health (NIH), contributing both the scientific expertise of nurse researchers and the insights of a clinical profession to the NIH community.

As the 21st century progresses, our nation's population will continue to grow, age, and become more diverse, increasing the challenges facing our health care system. Diseases that were once acute and life-threatening, such as heart disease, diabetes, and HIV, are now long-term, chronic conditions, and new global health threats continue to emerge. At NINR, we are working to make sure that nursing science stands ready to address these challenges and improve the health and well-being of all Americans.

## NINR'S RESEARCH ACTIVITIES IN SELF-MANAGEMENT

Nursing science brings a unique perspective to the interactions between healthy persons, patients and their families, and health practitioners. Nursing science explores self-management of health because it is closely linked to disease prevention, health promotion, and, in particular, symptom management. Issues of self-management arise in both acute and chronic disease, as well as at the end of life. Persons with chronic disabilities and long-term survivors of disease often need to manage their own health, going beyond merely adhering to treatment or adopting health-promoting behaviors.

As self-management includes sensitivity to cultural norms, values, and practices, it informs the emerging science of research on health disparities. Also, technology is becoming an increasing part of day-to-day patient care, presenting new challenges and driving new areas of research in self-management. NINR seeks to support research that will:

- Define the behaviors that support adherence to treatment for complex acute and chronic illnesses.
- Identify strategies for self-management and promotion of personal health among long-term survivors of disease and persons with chronic disabilities, including routine health monitoring and attention to co-morbid conditions.
- Develop technologies to facilitate early self-identification and self-reporting of symptoms.
- Design decision-making strategies that promote healthy lifestyle choices such as diet, exercise, and primary health care practices.
- Evaluate factors that impact independence and self-care in long-term care settings.

## RECENT NINR FINDINGS IN SELF-MANAGEMENT

- **Diabetes management for rural Blacks.** Many Blacks with diabetes who live in rural areas are overweight and have poor eating habits. A culturally-sensitive dietary program for rural Blacks, "Soul Food Light," provided a series of classes on practical tips for planning, purchasing, and preparing healthy, low-fat foods. Many of the classes concluded by sharing a meal prepared using low-fat techniques and ingredients. The participants lowered their dietary fat intake and their body weight, leading to improved glucose control and lipid levels, two factors important in assessing the effect of diabetes on health. *Anderson-Loftin, University of South Carolina, 2005.*

- **Women and IBS.** Irritable bowel syndrome (IBS), a functional disorder of the gastrointestinal tract, affects over 10% of women in industrialized nations. A group of women with IBS received a training program that provided education on IBS symptoms, dietary evaluation and counseling, relaxation strategies, and cognitive and behavioral strategies to minimize the effects of IBS. These women reported improved quality of life, and decreased bloating, constipation, bowel dysfunction, and stress. *Heitkemper, University of Washington, 2004.*

- **Dyspnea and COPD patients.** Among patients with chronic obstructive pulmonary disease (COPD), dyspnea is a common symptom that often decreases activity tolerance and quality of life. A group of COPD patients received education on dyspnea self-management that included discussion of the sensations, precipitants, and recognition of dyspnea, along with an exercise prescription. In addition, a study nurse called bi-weekly to monitor progress and provide feedback. The patients reported a decrease in dyspnea with daily activities, along with improved physical functioning and health-related quality of life. *Carrieri-Kohlman, University of California, San Francisco, 2005.*

- **Rural children with asthma.** Children with asthma living in rural communities often have limited access to health care and poor understanding of asthma medications or preventive strategies. An asthma education program taught a group of asthmatic children about asthma physiology and medications, use of a peak flow meter and a metered-dose-inhaler (MDI), and factors that could indicate or trigger an attack. Their parents also received instruction focused on the early signs of an asthma attack, levels of asthma severity, medications, avoiding triggers, and developing an asthma action plan. Children in this program had a significant decline in asthma symptoms and an increase in self-efficacy, while their parents also improved their asthma knowledge. *Butz, Johns Hopkins University, 2005.*

## RECENT AND ONGOING INITIATIVES

**Biotechnology Science in Self-Management and Informal Caregiving:** This initiative is designed to stimulate advances in research on the use of information and communications technology and biotechnology in self-management and informal caregiving. Science opportunities include research on how effectively, accurately, and safely the biotechnology systems can be integrated into self-management and caregiving.

**Chronic Illness Self-Management in Children:** NINR solicited applications to improve self-management and quality of life in children and adolescents with chronic diseases, with emphasis on studying children within the context of family and family community dynamics. Proposals that included factors specific to age, developmental stage, family, community, culture, race/ethnicity, or social issues were encouraged.

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