# KEEPING THE HOSPITALIZED ELDERLY HEALTHY

*Iowa Hospital's Program Helps Prevent Functional Decline in Older Patients*

BY NANCY HALFORD

Elderly people risk functional decline when they are hospitalized. An unfamiliar environment, reduced activity, unusual sensory stimuli, disrupted sleep patterns, changes in medication—all these can interfere with an older person's ability to think clearly and perform simple physical tasks.

At North Iowa Mercy Health Center (NIMHC), Mason City, we have instituted a program aimed at preventing functional decline in older patients. The program, called Nurses Improving Care to Hospitalized Elderly (NICHE), has shown improved outcomes in several categories.

## What Is NICHE?

NICHE, a nursing care delivery model, was developed by Methy Mezey and Terry Fulmer, RN, PhD, for the Columbia University School of Nursing, the New York University School of Nursing, and the Educational Development Center, Inc.

In 1994 NICHE was adopted by NIMHC, an acute care center linked in northern Iowa to 10 smaller hospitals, some 40 primary care physicians' offices, a skilled nursing unit, home care and hospice programs, and an independent living complex for older people.

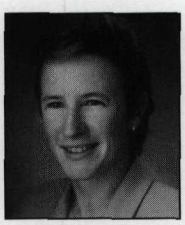
In developing NICHE at NIMHC, the project's leaders decided to include components from the Yale Geriatric Care Program (see Sharon K. Inouye, MD, et al., "The Yale Geriatric Care Program: A Model of Care to Prevent Functional Decline in Hospitalized Elderly Patients," *Journal of the American Geriatric Society*, December 1993). In addition, they decided they would employ NICHE on an orthopedic unit and a medical unit. The orthopedic unit was chosen because nearly all its patients received their care from a relatively cohesive group of seven physicians; the medical unit was chosen because a high percentage of its patients were frail elderly.

The project's leaders began by administering NICHE's Geriatric Institutional Assessment Profile to the hospital's staff: physicians, therapists, nurses, nursing assistants, housekeepers, and others. The tool measured the staff's attitudes regarding care of the elderly, their knowledge of institutional guidelines on such care, and their perceptions of institutional barriers that may block its delivery. The assessment indicated that NIMHC's staff needed to improve its skills in a broad range of geriatric issues.

## Educational Program

As a result of the assessment's findings, NIMHC developed an educational program, targeted primarily at nurses and nurse aides. In the first part of the program, a geriatric physician and a gerontologic nurse practitioner led four three-hour classes on the principles of geriatrics and leadership and change management skills. Among the topics discussed were geriatric nursing, the impact of hospitalization on the elderly, sleep disturbance and delirium, and the nursing application of geriatric pharmacology.

Perhaps more important than the classes was the integration of the principles into actual patient care delivery. The gerontologic nurse practitioner facilitated this by spending a good deal of time on the two units, helping staff members put what they had learned into practice.



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## Four Program Components

The practical part of the educational program had four important components, the first two taken from the Yale Geriatric Care Program.

**Geriatric Resource Nurses** The unit leaders designated one or two registered nurses on each shift to act as geriatric resource nurses. The resource nurses—each of whom was required to have leadership skills and a desire to learn more about geriatric nursing—attended 50 more hours of classes and received extensive mentoring from the gerontologic nurse practitioner. While continuing to perform their usual duties, the resource nurses also acted as consultants for the more complex geriatric cases.

**Mentored Rounds** Along with their other duties, the resource nurses facilitated "mentored rounds." These were discussions during which the resource nurse on duty would introduce each of the unit's high-risk, frail elderly patients to the members of a multidisciplinary team. The team—comprising the gerontologic nurse practitioner, staff nurses, therapists, dietitians, and representatives of other medical disciplines as needed—would then discuss the patient's case and agree on a comprehensive care plan.

**Protocol Development** The multidisciplinary teams were assembled to deal with specific health problems—for example, delirium or incontinence. After researching a given problem and discussing it with local experts, the team assigned to the problem would develop a protocol for treating it. The team would then share the protocol with other caregivers.

**Physician-Nurse Collaboration** The nursing staff was empowered by the protocols. Once they had the protocols to work with, nurses could address a number of patient health problems themselves. This was especially important in the treatment of chronic problems that patients, their families, and caregivers tend to find particularly frustrating.

## Improved Outcomes

NIMHC measured NICHE's effectiveness by following three primary indicators:

- Length of hospital stays
- Incidence of nosocomial infections
- Duration of delirium episodes

**Length of Hospital Stays** The most dramatic reduction in length of stay occurred in the orthopedic unit. This improvement could not be credited to NICHE alone because other interventions—development of care pathways, implementation of case management, introduction of a skilled nursing unit, and others—also helped reduce patient stays. Nevertheless, in the year after NICHE was introduced the unit saw lengths of stay drop from an average 7.8 days to 5.9 days for patients with major joint and limb problems. The average cost of treatment for those problems fell from $5,231 to $4,272 per patient stay.

**Length of Stay and Direct Cost for Major Joint and Limb Problems**

| | Before NICHE | After NICHE |
|---|---|---|
| Average length of stay | 7.8 days | 5.9 days |
| Average direct cost per patient stay | $5,231 | $4,272 |

**Number of Urinary Tract Infections**

| | 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|
| Medicine unit | 24 | 13 | 7 | 7 | 5 |
| Orthopedics | NO DATA | 16 | 12 | 6 | 8 |

**Incidence of Nosocomial Infections** When hospitalized, older people are often at risk for infections that result from having indwelling catheters placed in their urinary tracts. Because they know this occurs, caregivers like to avoid using catheters; when they must use them, they try to keep the duration as brief as possible. Before NICHE was implemented in NIMHC's orthopedic and medical units, 80 percent of the patients in both units received indwelling catheters; after NICHE, only 18 percent required them. Before NICHE, 50 percent of patients with catheters had them for 72 hours or longer; after NICHE, only 5 percent were catheterized for that length of time.

After NICHE was implemented in the orthopedic unit (in 1994) the number of urinary tract infections there began to fall steadily, from 24 in 1993 to five in 1997. In the medical unit (where NICHE was implemented in 1995), the infection rate fell from 16 in 1994 to eight in 1997.

**Duration of Delirium Episodes** NIMHC conducted a study of the delirium episodes in 30 patients. Before NICHE was implemented, the average duration of such episodes was four days. After it was implemented, the average duration was two days. Before NICHE, caregivers found it necessary to restrain 57 percent of delirious patients; after NICHE, only 17 percent of such patients had to be restrained.

> Once they had the protocols to work with, nurses could address a number of patient health problems themselves.

## Judging NICHE's Effectiveness

NIMHC has not conducted studies to evaluate the relative effectiveness of NICHE's four components. Nevertheless, it seems fair to say that each of them—geriatric resource nurses, mentored rounds, protocol development, and physician-nurse collaboration—have helped make staff members more aware of the problem. Having been made more aware, they have become more skillful in preserving our older patients from functional decline. □

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