TWICE: A NICHE Program at North Memorial Health Care

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Abstract

Becoming a site for Nurses Improving Care for Healthsystem Elders (NICHE) is an exciting way to improve the care of hospitalized elders. This article describes how a community-based hospital implemented the Geriatric Resource Nurse (GRN) Model on an orthopedic and acute medical surgical unit. Key elements of the program included focusing on a specific geriatric syndrome (acute confusion) and using outcome data to target practice changes. As a result, the incidence of acute confusion and the percentage of acutely confused patients at discharge decreased. (Geriatr Nurs 2002;23:133-8)

North Memorial Health Care was introduced to the Nurses Improving Care for Healthsystem Elders (NICHE) program after a staff member attended a presentation about it at a leadership conference. North Memorial is a 400-bed, community-based, Level 1 trauma center in Robbinsdale, a suburb of Minneapolis, Minn. Its patient population, like many hospitals, has shifted toward older and sicker patients, with 29% of total admissions being 70 or older.¹ The average length of stay of the elder patient is 4.69 days compared with 4.03 days for all patients.
More than half of the patients older than 70 are admitted to the hospital through the ED, and approximately 70% of those return home after discharge.

Care issues at North Memorial at the time of the leadership conference were similar to those NICHE was designed to address, such as confusion, skin breakdown, and falls. Nursing staff, including approximately 1000 RNs, needed preparation to provide age-specific care to hospitalized elders. Thus, a grassroots movement to improve care of elders was started—TWICE (Together We Improve Care for Elders). In this article, we describe how we implemented the NICHE program, focused on a specific geriatric syndrome, developed outcome measures, and changed practice.

GETTING STARTED

The nurse manager attending the leadership conference presented the basic NICHE concepts to the clinical practice committee and the vice president of patient care services, who then sent a core group of nurses to a NICHE conference in New York. Attendance at this conference was important for its opportunities to network with NICHE leaders and clinicians from other sites to learn practical methods for implementing the same ideas.

The North Memorial attendees returned with renewed energy, a sense of direction, and methods for starting a NICHE program. We agreed this approach would improve the care of our elders, and a steering committee representing nursing, ancillary services, and management was established to take responsibility for the program. The steering committee thought an interdisciplinary approach was essential for improving outcomes. Thus, the first steps were to establish a name for the program, design a logo to represent an interdisciplinary focus (Figure 1), and develop a project plan and timeline for implementation. The initial work components included selecting a pilot unit, promoting and publicizing TWICE, planning and administering the geriatric institutional assessment profile (GIAP), developing staff education, adapting current protocols for geriatric care, and creating and conducting an evaluation plan.

MODEL AND UNIT SELECTION

With the help of the NICHE tool, “Choosing the Right Nursing Model,” the steering committee decided to use the geriatric resource nurse (GRN) intervention model. This model was congruent with the hospital’s culture of the bedside caregiver being responsible for making clinical decisions and the nursing division’s total patient care delivery model. The GRN model includes the development of staff nurses to become unit experts for geriatric care. The TWICE GRN model also included focused rounding and care planning for frail elders and use of a unit-based interdisciplinary care management team to support the GRNs in providing care to elders with complex needs.

An evaluation of patient characteristics and current and anticipated projects for the nursing units found that only two of the nursing units were available for the pilot. The orthopedic nurse manager agreed to conduct the pilot on her 47-bed unit, which had a combined orthopedic/respiratory population in which 40% to 60% of the census consisted of patients 70 or older. The primary discharge diagnoses were major joint replacement and simple pneumonia. An orthopedic interdisciplinary care team was established to support the GRNs, including a geriatrician and a geriatric nurse practitioner (GNP) from a North Memorial clinic that provides care to nursing home patients, a social worker, a dietitian, a pharmacist, a nurse clinician working with the orthopedic physicians, and a home care liaison.

One of the potential barriers for sustaining a NICHE program, identified by the conference faculty and evident to the steering group, was not having a dedicated advanced practice nurse to lead the program. The GNP agreed to serve as part of the unit-based interdisciplinary team but was unable to coordinate the program because of other clinical responsibilities. The steering committee asked the organization’s professional practice specialist, who was also a gerontology clinical nurse specialist (PPS/CNS), to take the coordinator role in addition to supporting clinical initiatives throughout the hospital.

GERIATRIC INSTITUTIONAL ASSESSMENT PROFILE

The GIAP, developed by NICHE and made available to NICHE sites, was distributed to a random sample of RNs who cared for elders throughout the hospital or home care, as well as all of the staff (RNs, LPNs, NAs) on the pilot unit. The GIAP instrument helped identify staff perceptions, attitudes, and knowledge of common geriatric syndromes. Using the methods suggested in NICHE’s “Preparing to Conduct the GIAP,” the steering committee was able to achieve a response rate of 68% for the randomly selected RN sample (n = 298) and 98% (n = 48) for the pilot unit. The key strategies to ensure an adequate return rate included obtaining endorsement for the GIAP survey from the vice president, eliciting support from nurse managers and directors, attaching a cover letter to the survey that discussed the confidential nature of the information and the importance of staff input for changing practice, assigning unit champions to distribute and collect the surveys, and drawing prizes for participants who completed the survey.

North Memorial’s GIAP survey results indicated that the most significant knowledge deficits for the nursing staff were with basic geriatric practices, such as managing incontinence, preventing skin breakdown, and improving or maintaining functional status. In preparation for implementing the TWICE program, the geriatrician, GNP, and steering committee members conducted multiple in-services focusing on these basic practices for the pilot unit and hospital-wide. The inservices were well received, and the staff and nurse managers requested addi-
tional education. Methods for ongoing staff development included a monthly newsletter that provided two continuing education credits per year, periodic case study presentations, and between-shift in-services.

OPERATIONALIZING THE MODEL

Before the TWICE program started on June 2, 1999, on the pilot unit, two orthopedic RNs with geriatric interest and experience volunteered to be the first GRNs. They decided to work 10-hour shifts—8 hours spent providing direct patient care and 2 hours conducting rounds on frail elders to develop more appropriate plans of care. The PPS/CNS rounded with the orthopedic GRNs 5 days per week for the first year and twice a week in subsequent years to provide support and ongoing mentorship.

The SPICES acronym, explained in Table 1, was the basis for the GRN rounding process, although North Memorial’s acronym was somewhat different from the original NICHE work.6 The acronym was changed to better fit the needs of the unit’s primary elderly population (ie, hip fracture and joint replacement) as identified through quality data and staff feedback. Management of pre- and postoperative pain was identified as important for satisfying patients, decreasing the length of hospitalization, and preventing postoperative complications. The original SPICES acronym did not include a pain focus, so the meaning of the “P” was changed from poor nutrition to pain. Skin impairment was dropped from the acronym in favor of safety because the unit had a very low incidence of skin breakdown. Falls were incorporated into a broader category of patient safety; cognitive impairment was changed to confusion because of the high rate of postoperative delirium that occurs in the orthopedic population.7

The TWICE program begins on admission; staff nurses completed a SPICES card and the Blaylock Risk for Discharge Planning Instrument8 (part of the nursing database) to screen all patients at least 70 years old for geriatric syndromes. The Blaylock instrument, scored from 0-40, includes an assessment of age; living situation; physical, cognitive, behavioral, and sensory functioning; and comorbidity (eg, number of active medical problems). The Blaylock instrument, besides identifying risk for more extensive discharge planning, serves as an indirect method for assessing frailty. High scores (>9) on admission often indicate the patient will require more intensive nursing care and discharge attention.

In using the SPICES card, the admitting nurse checked the box corresponding to the letters of the acronym representing the patient’s problems and recorded the Blaylock score. The cards then were placed in the “SPICE rack.” The GRNs focused their patient rounds on the frailest elders as indicated by the number of SPICES and the Blaylock scores. During the rounds, the GRN and PPS/CNS conducted complete assessments focusing on the SPICES problems identified by the admitting nurse, made interdisciplinary referrals, provided patient education, and added to the care plan. The GRN contacted families or long-term care facilities to clarify patients’ baseline functioning if questions existed. Complex patients were referred to the TWICE interdisciplinary team meetings held biweekly for more extensive care planning and problem-solving.

EXPANDING THE PROGRAM TO THE ACMS

The second nursing unit to implement the TWICE program was a 47-bed acute medical surgical unit (ACMS). The major patient populations were renal failure (ie, patients requiring hemodialysis and peritoneal dialysis), infectious disease, pneumonia, chronic obstructive pulmonary disease, dehydration, and step-down trauma. The average daily census was 40 patients, of whom approximately 35% were at least 70. A medical/surgical/gerontologic clinical nurse specialist (ACMS/CNS) was hired to lead the implementation of the TWICE program on the ACMS unit in 2000.

Similarities and differences existed between the processes and personnel used to implement the TWICE program on the ACMS and orthopedic units. A major difference was the location and functioning of the CNS. Even though the ACMS/CNS was responsible for supporting all the medical/surgical nursing units, the major focus was ACMS patients. Advantages of having a CNS primarily for one unit include increased availability to staff and ability to follow up with patients and families regarding patients’ progress. The CNS was able to provide a sense of continuity.

The ACMS unit also had an interdisciplinary team to support the management of complex patients. The
ACMS/CNS consulted with the charge nurse and other team members to help decide which patients were high priorities for team rounds. In general, criteria for referral were complex patients transferred from critical care, patients experiencing delayed recoveries with multiple disciplines involved in their care, confused elderly patients, and patients with frequent readmissions. Interdisciplinary members attending the rounds included the chaplain, dietitian, pharmacist, social worker, nurse caring for the patient, and ACMS/CNS. A utilization manager attended the rounds only for patients with prolonged hospitalizations, complex patients who stabilized and met criteria to move to the next level of care, or patients who were readmitted frequently. Patients and their families often participated and provided valuable information about the patient functioning outside the hospital. When GRNs presented their patients’ cases in care management rounds, they demonstrated their pride and added knowledge for caring for older patients.

FOCUSBING ON A SPECIFIC GERIATRIC SYNDROME

The results of the GIAP survey helped focus initial outcome goals for the TWICE program. Staff responses indicated that managing care for confused elderly patients was problematic for nurses throughout the organization. Acute confusion or delirium that occurs during hospitalization (ie, incidence) was selected as the first quality focus for its iatrogenic nature and frequency in older patients.9 Acute confusion was defined as an attention disorder that also impairs consciousness, cognition, perception, and psychomotor behavior that develops abruptly and fluctuates in its severity.10,11

A literature review indicated a multi-intervention approach was important in preventing and managing acute confusion. Such an approach includes staff education, standardized assessment of cognitive status, and identification of contributing factors with focused interventions that eliminate, decrease, or control the effects of those specific factors.12,13 The goal for both units was to reduce the incidence of acute confusion, the number of days or severity of confusion, and the percentage of acutely confused patients who remained confused at discharge (see Table 2). The orthopedic unit, which used restraints as a last resort, wanted to decrease the average time a confused patient was restrained.

To improve the staff’s ability to manage the care for confused elders, education sessions on assessment and non-pharmacologic and pharmacologic management were initiated on the orthopedic unit in 1999 and the ACMS unit in 2000. A roundtable format was used for both units in which 20 minutes of information was followed by discussion questions. The geriatrician, GNP, PPS/CNS, ACMS/CNS, and other members of the steering committee conducted the roundtables. The goal was to involve staff and allow them to relate the new information to their own experience and practice. Two back-to-back 45-minute sessions were conducted over shift breaks for each of the three topics. To encourage attendance, pizza was provided for each session, and the nurse managers of the two units added extra staff.

The NEECHAM Acute Confusion Instrument was selected to standardize the assessment of acute confusion.14 Staff nurses initiated the instrument on admission and used it daily for all patients older than 70. The instrument was chosen for its high sensitivity, minimal patient response burden, and demonstrated clinical feasibility, which made it a useful screen to incorporate into routine nursing assessments.15 The instrument measures cognitive processing, behavior, and physiologic control and scores indicate normal functioning (27-30), risk for confusion (25-26), mild or early development of confusion (20-24), and moderate

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Measurement</th>
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<tr>
<td>Incidence of confusion: confusion not present on admission but occurring during hospitalization</td>
<td>Admission NEECHAM score &gt; 25 with at least one score &lt; 25 while hospitalized</td>
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<tr>
<td>Prevalence of confusion: confusion present on admission</td>
<td>NEECHAM score &lt; 25 on admission</td>
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<tr>
<td>Severity of confusion</td>
<td>Lowest NEECHAM score obtained while hospitalized</td>
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<tr>
<td>Days of confusion</td>
<td>Number of hospital days with NEECHAM scores &lt; 25</td>
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<tr>
<td>Not confused on discharge</td>
<td>NEECHAM scores &gt; 24 on discharge</td>
</tr>
<tr>
<td>Contributing factors for developing confusion during hospitalization</td>
<td>Environmental concerns, infection, malnutrition, medications known to contribute to confusion, metabolic abnormalities, substance abuse, uncontrolled pain, other factors documented by physicians and nurses</td>
</tr>
<tr>
<td>Average time in restraints</td>
<td>Total hours restrained</td>
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to severe confusion (0-19). Consistent use of the instrument helped identify high-risk patients and patients already confused. It also triggered referrals to the GRNs, CNSs, and the units’ interdisciplinary teams and served as a method for ongoing monitoring of cognitive functioning.

The NICHE acute confusion protocol provided the most up-to-date guide for nursing assessment and intervention. The confusion protocol helped identify the contributing factors specific to a patient and the interventions that could address those factors. Contributing factors precipitating the development of acute confusion as identified through a literature review included medications, infections, fluid and electrolyte imbalances, metabolic disturbances, malnutrition, uncontrolled pain, substance abuse, and environmental concerns that caused sensory deprivation or overload. The routine preprinted orthopedic orders also were revised to eliminate medications known to cause confusion.

OUTCOMES

The incidence of confusion for all orthopedic patients older than 70 was 20% (n = 199) for the first 2 months of the TWICE program and declined steadily every month to 4.8% (n = 63) in December 1999. This low rate was not sustained as evidenced by a gradual increase each month to 14% (n = 54) by December 2000. Even with the gradual increase in the incidence of confusion the second year, the average days of confusion for these patients continued to be fewer than 3, ranging from 1.66 to 2.7 days. At the end of 2000, only 19% (n = 90) of patients who became confused while hospitalized were still confused at discharge, compared with studies in the literature that have reported a discharge confusion rate of 32% to 58%. The average time in restraints decreased from 2 days to 22 hours.

The ability to use outcome data to narrow the improvement focus helped effectively allocate scarce resources and develop targeted practice changes. Specifically, 40% (n = 171) of the orthopedic patients who developed confusion in 1999 and 2000 were admitted with a hip fracture; as a result, the team decided in 2001 to focus primarily on reducing the incidence of confusion in this population. Through chart reviews on contributing factors for acute confusion, inadequate pain management, malnutrition, dehydration, and prolonged use of bladder catheters (more than 2 days) were identified as the most prevalent factors for this population. Thus, the focus for improvement concentrated on removing bladder catheters early, standardizing pain management, starting nutritional supplements for high-risk patients, and ensuring adequate hydration.

In addition, the pain management CNS or the pain resource nurse began attending the unit-based interdisciplinary team meetings to help improve pain management, and four additional GRNs were recruited. As a result of these changes, the incidence of confusion for patients with hip fractures declined (1999: 21.2%, n = 146; 2000: 18%, n = 172; 2001: 12.8%, n = 211).

FUNDING FOR THE TWICE PROGRAM

Initial financial support for the TWICE program was obtained from North Memorial’s United Way campaign. The Minneapolis United Way Agency allows the North Memorial United Way Committee to select a hospital-designated program to be among the choices staff can select to support with their donations. The TWICE program was selected in 1999 for funding. A total of $32,000 was donated by employees during the hospital’s United Way fund drive. As shown in Table 3, the TWICE steering committee outlined criteria for prioritizing the money. Thus far, funds have been used for such direct care items as elder-friendly clocks for patient rooms, reminiscence magazines and tapes, activity boxes, a blanket warmer, and staff education. The TWICE steering committee is exploring funding partnerships with local and national colleagues with closely aligned goals.

CONCLUSION

Many lessons have been learned since the core group attended the NICHE conference. The NICHE tools and GIAP survey were very effective in developing the TWICE model, focusing staff education, and identifying the first quality improvement focus. The incidence of acute confusion was reduced using a multi-interventional approach that included staff education, standardized assessment for acute confusion, and identification of contributing factors with targeted interventions. Also, outcome data helped narrow the focus for improving practice so that resources were used effectively. Support of an active steering committee was important to keep the program moving forward, and the experience obtained from the pilot unit served as a basis for change on the next unit. TWICE is truly a work in progress at North Memorial and will continue to expand to other nursing units.
REFERENCES

5. NICHE. Preparing to conduct the GIAP: a guide for NICHE sites. New York: NICHE Project.

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