NICHE Hospitals report

Nurses Improving Care for Healthsystem Elders

Research Conducted in NICHE Hospitals: Delirium

NICHE Hospitals are major sites for important research studies. Following are research efforts, initiatives and outcomes reported by researchers utilizing NICHE Hospitals:

Quality Improvement Projects:

NICHE Site: Newark-Wayne Community Hospital. This initiative addressed the prevention and treatment of delirium in older adult patients at a rural hospital. Current delirium research is often focused at urban hospitals where geriatric consultation services are available. Also, the literature has emphasized treatment rather than prevention of delirium. The hospital recognized the need to develop a risk stratification protocol to identify those at risk for delirium so early prevention could be implemented. The goals included keeping patients engaged and active, early recognition of delirium, preventing sleep cycle disruptions and fall prevention. A central component of the protocol at the rural facility was a unique telemedicine program to allow geriatric specialist consultations “at a distance.” Other interventions involved:

- Staff education for early recognition of delirium
- “Red socks” fall prevention program
- Hearing amplifiers to improve patient communication
- Pharmacy review program to limit use of meds that could exacerbate delirium
- Activity cart
- “Move to Improve” program to promote mobility

Results: From 2009 to the first half of 2013, average lengths of stay for delirium patients decreased from 9 days to 2.8 days and delirium patients discharged to home increased by 4%. From 2009 to 2011, average total costs for delirium patients dropped nearly $3000.¹

NICHE Site: University of Iowa Hospitals and Clinics. This quality improvement project had three goals:

- Identify RN compliance with documentation of evidence-based assessment tool results for delirium and functional status
- Determine the strength of agreement between RN Delirium Observation Screening Scale (DOS Scale) score and MD diagnosis of delirium
- Determine the strength of agreement between RN DOS Scale score and RN diagnosis of acute confusion

As part of the hospital's NICHE Program, the DOS Scale and the Barthel Index (BI) were programmed into the electronic documentation system for patients over 65-years-of-age on NICHE pilot units. Also, a BI and DOS Scale report was developed to reveal trends. Nurses documented the DOS Scale twice a day, and the BI once a day. Nurses received DOS Scale training that included demonstrations by the NICHE Coordinators, monthly reminders, periodic feedback about documentation compliance and coaching from unit-based Geriatric Resource Nurses. Working as a multidisciplinary team, a physician order set was developed to assist the physician in the care of the patient with delirium. A DOS Scale score of >3 prompts a best practice alert in the EMR for the RN to notify the physician to initiate the delirium order set. Also, a Patient/Family handout was available to staff through the hospital's patient education site.

Results: For the DOS Scale validation, 100 patients were reviewed on a general medical surgical unit. The DOS Scale appeared only for patients over the age of 65. The Delirium Rating Scale-Revised-98 (DRS-R-98) was scored with the DOS Scale: 91/100 (92%). The DOS Scale showed a sensitivity of 0.9 (CI 0.54-0.99) with a specificity of 0.91 (CI 0.83-0.96). This was key, as the DOS Scale was able to consistently rule out non-delirious patients. Positive DRS screens for delirium were significantly correlated with a positive DOS Scale screen for delirium (r = .80, p <.001) — high concurrent and convergent validity. 17 tested positive for delirium (9 true positives, 8 false positives); 83 tested negative for delirium (82 true negatives, 1 false negative).

Documentation Compliance Results:
Over a four-month period, compliance increased 25% at the two NICHE pilot units.

Strength of Agreement Results:
- Strong association between DOS Scale scores and MD diagnosis of delirium (Cohen's Kappa = 0.89)
- Strong association between staff RN and geriatrics CNS DOS Scale scores (Cohen's Kappa = 0.83)
- Moderate association between DOS Scale scores and RN diagnosis of acute confusion (Cohen's Kappa = 0.77)
- Moderate association between BI and functional status (Correlation 0.893)²

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References
2. 2012 NICHE Conference Poster: Monitoring Delirium and Functional Status Using the Electronic Health Record. Tom J. Blodgett, RN, MSN and Grace Matthews, RN, MSN, University of Iowa Hospitals & Clinics, Iowa City, IA.
3. 2012 NICHE Conference Poster: Yes we CAM! Suann Cirigliano Schutt, MS, RN-BC, CEP and Christine Turver, MS, RN, CNS, El Camino Hospital, Mountainview, California.
4. NICHE 2013 Conference Poster: Nurse Recognition of Acute Delirium - A Pilot Study. Bette K. Idemoto, PhD, RN, ACNS-BC, CCRN and Denise M. Kresevic, PhD, RN, APN-BC, University Hospitals Case Medical Center, Cleveland, Ohio.

Research Conducted in NICHE Hospitals: Delirium

NICHE Site: El Camino Hospital. This initiative used an electronic Confusion Assessment Method (CAM) tool for patients 65-and-older to provide daily acute delirium risk monitoring which was not previously available for this at-risk group. The hospital team selected Dr. Sharon Inouye’s CAM screening tool and incorporated it into their electronic medical record in order to evaluate the hospitalized elderly population.

A computerized version of the CAM was not available at the time of the project so electronic tools were developed and integrated into the hospital’s Adult Admission Note and assessment flow sheets. The tools were developed in collaboration with an IS analyst who was also an RN, guaranteeing an effective translation. The CAM was incorporated into daily practice beginning with the admission assessment and later with daily screenings. An Acute Delirium Plan of Care was also developed and automatically generated when a positive CAM screening occurred. Education about the CAM was incorporated into monthly in-services for nurses.

Results: As of May 2012, 437 evaluations including medication evaluation, referrals, patient/family education had been performed. Nursing compliance was nearly 100% due to the fact that the CAM task automatically appeared on the nurses’ work lists. Missed tasks turned “red,” alerting nurses if the CAM was not completed. In October 2011, a dedicated NICHE Nurse Practitioner began using CAM scores to prioritize patient assessments/consultations. CAM scores now allow focused diagnoses, recommendations and evaluation of patient progress. On May 15, 2012, the role of the NICHE NP progressed to working with the transitions/readmission reduction focused-project. The hospital continues evaluating patients 65-and-older daily with the CAM. The APN continues to support the nursing staff with patients experiencing delirium, dementia and positive CAM scores.1

NICHE Site: University Hospitals Case Medical Center. This innovative Clinical Nurse Specialist (CNS) multi-phased educational program included didactic teaching, bedside mentoring and consultation. Interventions included:
• General nursing orientation classes, overview of delirium
• Post-orientation classes on CAM-ICU
• Assessment using CAM-ICU
• Non-pharmacologic management of delirium
• Policies and guideline revisions for delirium management
• CNS consultations: interdisciplinary rounds
• Educational program including case studies and delirium algorithm

Results: The study involved baseline chart reviews to assess consistency and accuracy in use of the CAM-ICU by bedside RNs with data collected using caregiver surveys and patient chart reviews. Results: Accurate CAM-ICU use was higher among the medical RNs (88%) as compared to ICU RNs (27%). Medical RNs reported feeling less competent compared to the ICU RNs despite education on delirium. Charts revealed very low rates of documentation of delirium management strategies (<10%). Clinical practice implications: Prevalence of delirium was high, yet despite the use of standardized instruments, detection was low (33-50%).4

About NICHE
NICHE (Nurses Improving Care for Healthsystem Elders) is an international program designed to help hospitals improve the care of older adults. The vision of NICHE is for all patients 65-and-over to be given sensitive and exemplary care. The mission of NICHE is to provide principles and tools to stimulate a change in the culture of health care facilities to achieve patient-centered care for older adults. NICHE, based at NYU College of Nursing, comprises hospitals and health systems located in 46 states, Canada, and Bermuda. For more information visit nicheprogram.org.