

Nurses Improving Care for Healthsystem Elders

# NICHE



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### SCREENING OF OLDER ADULTS FOR DELIRIUM RISK PRIOR TO ORTHOPEDIC SURGERY

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**PROBLEM:** Prevalence of delirium in older adults following orthopedic surgery.

**SOLUTION:** Outpatient and inpatient screening prior to surgery.

**Problem Identified** The Cleveland Clinic discovered that the incidence of delirium after elective hip surgery was up to 15%. The consequences included increased length of stay, greater risk of fall, higher cost of hospitalization, more risk of nursing home placement, and increased mortality. Much of the difficulty in treating delirium in the hospital is the challenge of detection. Early recognition is essential to address correctable factors such as electrolyte imbalance, hypoxia, ischemia, or infection.



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**Solution Formulated** Clinical trials have shown that interventions can reduce the risk of delirium in older adults during hospitalization. Nursing interventions for medical acute care hospitalizations have demonstrated a 40% reduction in risk of delirium. In order to reduce the incidence of delirium further, a nurse/physician research effort at the Cleveland Clinic considered the necessity of outpatient/inpatient screening for high-risk individuals prior to orthopedic surgery.

Goals of the study were:

- Test a previously validated preoperative screening tool, the Cleveland Clinic Confusion Scale, in clinical practice
- Determine what diagnostic and therapeutic actions clinicians take in responding to patients who develop delirium in the hospital

**NICHE Role** The NICHE Geriatric Resource Nurse (GRN) core curriculum is designed for use by those at NICHE sites who train nurses in best practices for hospitalized older adults. GRNs are the foundation of system-wide improvement to achieve positive outcomes for hospitalized older adults. The NICHE program, available to hospitals throughout North America, offers evidence-based, interdisciplinary approaches to promote improved care for the hospitalized older adult.

## Evaluation/Results

Outpatient Screening:

- 41 patients screened
- 15 of 41 patients had a positive score (>2) on the Cleveland Clinic Confusion (CCC)
- 3 of the 15 patients developed delirium—Positive Predictive Value 20%
- 2 of the patients who developed delirium had a negative CCC score—Negative Predictive Value 92%

Inpatient Screening:

- 474 patients screened using the Nursing Delirium Screening Scale (Nu-DESC)
- 27 patients screened positive (score > 2) indicating delirium
- 23 of the 27 patients had clinical notes indicating delirium
- Most common response was to hold all narcotics
- Constant observation by use of companions used in 33% of the cases
- 9 consults: 1 to psychiatry, 1 to neurology, 7 to hospital medicine

Conclusions of the Study:

- Screening for delirium risk factors in a preoperative clinic is feasible
- The Cleveland Clinic Confusion Score is a useful preoperative screening tool
- Nu-DESC is an effective way to screen for post-operative delirium

### For more information

1. Marcantonio ER, Flacker JM, Wright RJ, Resnick NM. Reducing delirium after hip fracture: a randomized trial. *Journal of the American Geriatrics Society*. 2001;49(5):516-522.
2. Litaker D, Locala J, Franco K, Bronson DL, Tannous Z. Preoperative risk factors for postoperative delirium. *General Hospital Psychiatry*. 2001;23(2):84-89.
3. Gaudreau JD, Gagnon P, Harel F, Tremblay A, Roy MA. Fast, systematic, and continuous delirium assessment in hospitalized patients: the nursing delirium screening scale. *J Pain Symptom Manage*. Apr 2005;29(4):368-375.

### NICHE-related resources

1. Geriatric Resource Nurse (GRN) - Module 3: Depression, Delirium, & Dementia: [http://www.nicheprogram.org/course\\_modules/124](http://www.nicheprogram.org/course_modules/124)
2. Need to Know by NICHE - Delirium: [http://www.nicheprogram.org/need\\_to\\_know](http://www.nicheprogram.org/need_to_know)
3. Try This: Confusion Assessment Method (CAM) & Try This: Confusion Assessment Method ICU (CAM-ICU): [http://hartforddign.org/Resources/Try\\_This\\_Series/](http://hartforddign.org/Resources/Try_This_Series/)

## About NICHE

NICHE is a national organization designed to help health care professionals in hospitals improve the care of older adults. NICHE hospitals seek to create an environment where older adult patients receive care that results in better outcomes. This climate of success encourages patients and their families to seek NICHE designated hospitals for their medical needs. The NICHE Network now numbers nearly 300 hospitals throughout North America.

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