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Postoperative Delirium: Assessing the At Risk Population


Norton Hospital
Louisville, KY

April 20, 2017

PODIUM PRESENTER:



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Objectives

1. Discuss simple risk assessment and early intervention as measures to prevent delirium
2. Review a process improvement plan's interventions to increase awareness and compliance with delirium assessment and treatment.
3. Consider outcomes related to implementation of the Delirium Prevention and Management process improvement initiative.

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Norton Hospital Louisville, KY

- Licensed Beds 609
- NICHE Certified January 2017
- Academic Urban Medical Center
- \$2.1 billion annual revenue

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National population of those age 65 + expected to increase to 19.4% of the population by 2021

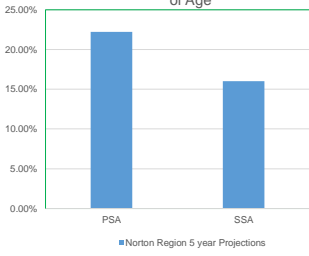


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Norton Region Increase in patients >65 Years of Age



Category	Percentage
PSA	~22.5%
SSA	~16.5%

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Prevalence

- Affects up to 61% of all older adults in hospitals
- Affects up to 50% of older postoperative patients
- 1/3 of all operations are performed on those age 65 and older
- Up to 80% of ventilated critical care patients experience delirium
- Delirium undetected up to 65% of the time without use of assessment tool


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Significance

- Increased mortality, prolonged ICU and hospital LOS (average of 21 days compared to 9 days for those without delirium)
- Development of short and long-term cognitive impairment
 - Post-op Delirium (POD) is followed by Post-Op Cognitive Dysfunction syndrome (POCD)
- Increased time on ventilator
- ICU cost estimates \$4 - \$16 billion annually
- Estimates vary but as high as \$150 billion spent annually in U.S. on Delirium overall


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Significance

- A year after discharge, 80 percent of 821 ICU patients ages 18 to 99 scored lower on cognitive tests than their age and education would have predicted
- Nearly two-thirds had scores similar to patients with traumatic brain injury or mild Alzheimer's disease.
- Only 6 percent cognitively impaired before their hospitalization.


(Wesley Ely, 2002)


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Significance

- 3-fold increase in mortality at 6 months
- Increased 30 & 180 day mortality post-discharge after aortic valve surgery in patients over age 80.
- Every day of delirium increases risk of death by 10%

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Significance

Gleason, et al., found that compared to all other complications after elective surgery in older adults, delirium “exerted the highest attributable risk” for adverse outcomes including prolonged LOS, Institutional discharge, and 30-day readmission.

(Gleason 2015)

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Background


Early 2015

Dr. Sarah Parson, Geriatric Oncologist, concerned about lack of attention to acute delirium

Suggestion: I.D. patients at risk pre-op and in patient and intervene early

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Background

Prior State Assessment Norton Hospital

- No risk identification for any patients
- No process for addressing delirium in pre-op/PAT
- Widespread lack of recognition of delirium – *Cannot then know its prevalence in our hospital.*
- Lack of Staff Engagement

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Background

Prior State Assessment Norton Hospital

- 24% compliance with assessment tool usage
- No coordinated/consistent interprofessional approach
- No care plan or education in EMR
- Lack of sufficient patient/family education resources


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Purpose

keep it simple


1. Increase awareness
2. Change behavior to improve outcomes
 - BJ Fogg, Roger's Theory of Diffusion of Innovation
 - ✓ Increase motivation
 - ✓ Make it easy
 - ✓ Trigger action
 - Champions for peer-to-peer influence (PAD Guidelines)


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The Plan


1. Identify patients at risk in PAT, Pre-op, and inpatient units
 - Lit review to identify major risk factors:
 - Hx Dementia
 - Hx of delirium
 - Self-report of excessive alcohol use
 - Recent or current use of benzodiazepines
 - Recent or current use of narcotics
 - Age >65 y.o.
 - ICU stay
 - Post-operative status
 - Uncontrolled pain.


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The Plan

2. Intervene as soon as risk identified
3. Assess applicable patient populations using one tool for all
 - CAM-ICU can be used in all patient populations
 - Staff in all inpatient units already assess RASS for sedation with narcotics administration, etc.
 - RASS linked to CAM score and answers feature 3 automatically.
 - Cam calculates automatically so that assessment stops when positive.


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Implementation

Worked with EMR team to rearrange Delirium documentation


1. Added risk assessment to PAT & Pre-op navigators and to inpatient neuro assessment flowsheet. "Yes" if any one factor is present.
2. Interventions rows populate as soon as yes is answered to risk question.
 - **Triggers** nurse to intervene early
3. CAM done on anyone who is at risk q.s. and prn.


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Implementation – Nursing Education


- Recruited Champion volunteers
 - 2 hour class with testimonials and discussion to motivate champions (The American Geriatrics Society, 2014; Barr, 2013)
- Presented Nursing Grand Rounds on topic
- Recorded nursing grand rounds for required education two weeks prior to go live


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Nursing Education Emphasis

- Nurse-driven impact
- Prevention & Minimization
- Experience of patient in the moment
- Long-term effects: loss of independence, significant cognitive decline, mortality.


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Implementation

Delirium assessment competencies


- ❖ CAM competency validation at bedside
 - Bedside Nurse Champions
 - APRN nurse specialists
 - Clinical Nurse Educators

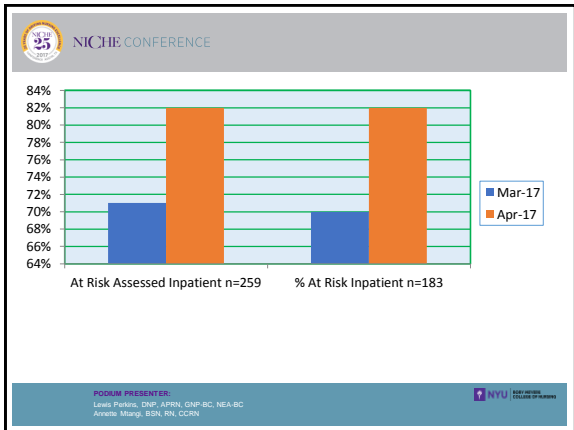
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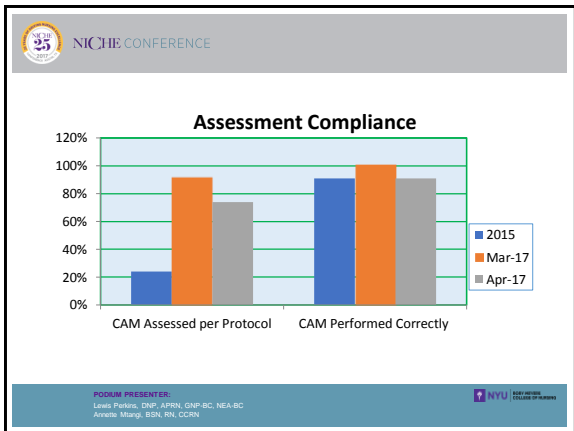

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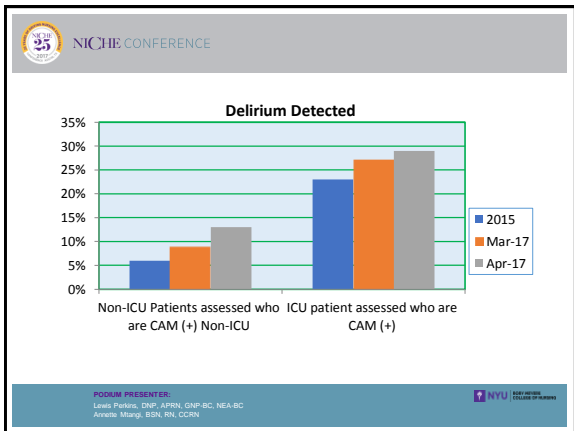
Implementation

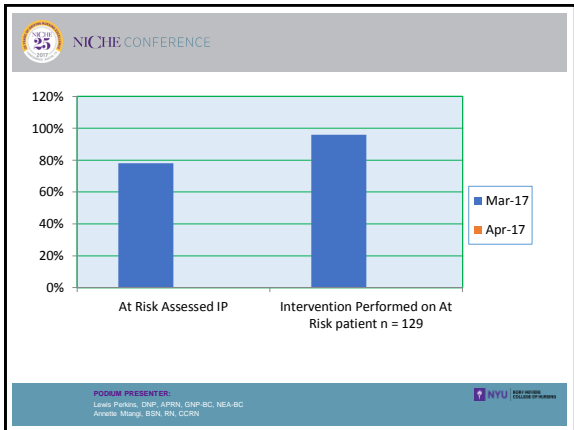
- Anesthesia notification when pre-op/PAT patient at risk
- Delirium RISK highlights on Anesthesia Banner yes PAT or Pre-op answer yes to RISK question
- Coordinate education for anesthesia group with Northstar Medical Director, Chief CRNA, and Peri-op APRN

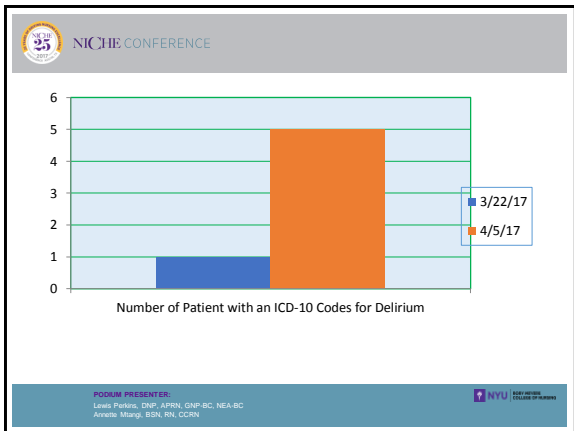
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Barriers to Process Improvement plan

- Multiple delays in EPIC production caused some champions to lose interest, or to leave organization before education and go-live.
- Multiple competing large scale change initiatives
- Change in anesthesia contract

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Conclusions

1. Increased motivation of nursing staff with champion training, motivational education
2. Increased awareness of Delirium
 - PAT, Pre-op, and inpatient bedside nursing staff,
 - Nursing leadership leading interdisciplinary rounds
 - Anesthesia personnel
3. Increased compliance through education, motivation, decreasing complexity of compliance and accountability (APRN/leader rounding).

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Conclusions

1. Logic Model and Control plan instrumental in implementation and current evaluation phase.
2. Control plan adherence and follow through should improve compliance and competence further.
3. Projected increase in elderly population will benefit from these changes.
4. Next steps are to understand the impact on post-op elderly

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