A.B.C. Delirium
Fighting the Dysfunction Head On

Kaitlyn Gregory, RN, BSN
Erin Longstreth-Papsun, RN, BSN, MSN, OCN
Allyson Lloret, RN, BSN
Ashley Moyer, RN, BSN
Purpose

- Early identification and implementation of therapeutic modalities designed to prevent or decrease ICU delirium in our high-risk oncology population at Fox Chase Cancer Center (FCCC)

- Achieved by:
  - Implementing an approved delirium assessment tool, the CAM-ICU, on every patient
  - Altering the ICU culture to focus delirium management on prevention by applying a widely used evidence-based multicomponent prevention practice known as the ABCDE(F) protocol bundle
What Is Delirium?

- A multifactorial syndrome characterized by a disruption of consciousness, with associated changes in cognition, a specific consequence for the critically ill
  - Hyperactive
    - Less than 2% of those experiencing ICU delirium
    - Easy to recognize
  - Hypoactive
    - More than 40% of patients who are delirious; frequently missed; far worse long-term outcomes
Delirium Dilemma

- Prevalence of delirium in the ICU reported to be 20%-50% of patients who are not intubated and 60%-85% of patients who receive mechanical ventilation.
- Missed by critical care nurses and physicians approximately 72% of the time when using general bedside assessment.
- Many poor outcomes associated with ICU delirium:
  - Higher morbidity and mortality extending beyond hospital discharge.
  - Longer hospital stays and ventilator and ICU days.
  - Higher costs of care.
  - Long-term deterioration of cognitive and functional processes.
Dilemma Continues

- Each additional day with delirium is associated with a 20% increased risk of prolonged hospitalization and a 10% increased risk of death.
- ICU costs for someone who develops delirium increase from $13,332 to $22,346; overall hospital costs increase from $27,106 to $41,836.
- Overall posthospital treatment for ICU delirium has reportedly cost this country $143 billion-$152 billion annually.
Why Is Delirium a Problem at FCCC?

- Oncology population is at an assumed high risk for ICU delirium
  - Chronic illness
  - Disease process: brain metastasis, speech and hearing deficits, etc
- Many patients in ICU due to major surgery or complications of their disease process; severity of their illness is extremely high
  - 50%-60% of our patient population is older than 65.
  - Many patients are on baseline narcotics and benzodiazepines.
The Start of Change

- FCCC ICU RNs’ knowledge and attitude survey:
  - More than 45% of ICU RNs were only minimally comfortable caring for patients who are delirious.
  - Only 15% had confidence in their skills to assess delirium.
- The CAM-ICU and ABCDE(F) standard and assessments were rolled out in November and monitored monthly for compliance.
A

- Awaken patients on ventilator
- Stop sedation to allow for awakening once daily
- Teaching: daily ‘sedation vacation’ around the same time daily

B

- Breathing for patients on ventilator
- If patient tolerates awakening, call resp. for spontaneous breathing trial
- Teaching: Patients should be on CPAP trial while awake, not sedated

C

- Choice of sedation: avoid benzodiazepines
- If baseline benzodiazepine user, suggest psych consult
- For continuous sedation, use propofol or dexmedetomidine; Ramsey Q 2 hours
- Teaching: proper titration of dexmedetomidine and propofol. Use of alternative medications and modalities for patient agitation
• Delirium detection: Perform CAM-ICU monitoring once a shift and document.
• If CAM is positive, consider Haldol and alert physician (see Haldol protocol).
• Teaching: CAM-ICU is vital in early detection. It is equally important to alert physician on findings.

• Ambulate 1-3 times a day, stable vent patients to chair and stand/walk, utilize portable vent, unstable in bed ROM, PT consult if needed.
• Teaching: Early ambulation is associated with lower ventilator days and overall decreased LOS. Orally intubated patients CAN be walked daily.

• Further care
• Sleep, noise, light, nutrition/hydration, orientation
• Teaching: These areas were identified as important considerations by the CSI team.
**Acute onset or fluctuating course**
Is the patient different than his/her baseline mental status?
Has the patient had any fluctuation in mental status in the past 24 hours?

- **YES**
  - **Inattention**
    “When you hear the letter ‘A,’ indicate by squeezing my hand.”
    - **SAVE A H A A R T**
      - > 2 errors

- **NO**
  - **Altered level of consciousness**
    Present if the Actual Ramsey score is anything other than cooperative, oriented, and tranquil (2)
    - Ramsey > or < 2

**CAM-ICU NEGATIVE**
No delirium

**CAM-ICU POSITIVE**
DELIRIUM present

**Yes/No Questions**
Will a stone float on water?
Are there fish in the sea?
Say to patient: “Hold up this many fingers.”
“Now do the same thing with the other hand.”

> > 1 Error

0-1 Errors

**CAM-ICU NEGATIVE**
No delirium
Project Goals

Short-Term Goals
- Educate 80% of staff.
- Create ABCDE(F) bundle protocol.
- Present goals to ICU and practice council for approval.

Intermediate Goals
- Educate 100% of staff.
- Roll out bundle protocol and CAM-ICU.
- Increase RN satisfaction to 50%.
Project Goals

Long-Term Goals

- Achieve 100% compliance with CAM-ICU assessment and prevention checklist.
- Decrease Haldoperidol usage to treat delirium by 50%, as evidenced by quarterly pharmacy printouts and chart reviews.
- Increase RN comfort level in caring for patients who are delirious by 80% using a postimplementation survey.
May 2013
- Preproject survey sent to RN staff

June 2013
- Haldol profile for one year retrieved from pharmacy

July-Sept. 2013
- ICU bundle protocol submitted and approved by ICU committee
- CSI members tested and refined CAM-ICU to fit FCCC need
Sept.-Oct. 2013
- Promotional giveaways and games for staff to build excitement
- Staff involvement - PAD trackers picked up at conference

Nov. 2013
- Kickoff party!

Dec. 2013
- Inservices on sedation medications by drug representative
Jan. 2014
- Met with PT regarding early mobility in ABCDE(F) bundle

Feb.-Apr. 2014
- Monthly CAM- ICU audits
- New manager!

May 2014
- One-on-one inservice of staff
- Early mobility protocol developed and submitted to ICU committee for approval
June 2014
- New staff swag ordered
- New bulletin board to celebrate staff success

July 2014
- Staff compliance at an all-time high
- Sleep kits for patient comfort received
Funding Breakdown

- Salary and wages
- Educational games/prizes
- Kick off party
- T-shirts
- Pens and highlighters
- Pocket cards
- Patient comfort kits
- Water bottles
- Project maintenance
CAM-ICU Compliance

One-on-one inservice
Length of Stay
Financial Outcomes

- We used national average for ICU cost: $3500/day.
- We decreased average length of stay by 0.1 patient day.
- Our average census is 6 patients per day.
- Our calculation: $3500(0.1) \times 6(365) = $766,500
- We have saved our hospital $766,500!!
Haldol Usage

Haldol Doses

2012-2013

2013-2014
Nurse Surveys

Comfort in caring for delirious patients

Confidence in delirium assessment

Pre-Survey
Post-Survey
Unexpected Outcomes

- Magnet moment recognition award for innovation during FCCC nurses week
- Podium presentation and networking at Philadelphia’s Magnet Consortium
- Early mobility protocol established
- Increased communication between respiratory and physical therapy
- Ideas and enthusiasm to continue delirium in other aspects of our careers
  - eg, school papers and DNP capstone project
Barriers

- Lack of unit leadership until March 2014
- Staff fatigue – long-term patients; needed a change
- Life events for team members – Babies! School! Weddings! Houses!
Project Maintenance

- Convert CAM-ICU and ABCDE(F) to computerized charting.
- Bridge the CAM-ICU to med/surg floors and over to Jeanes Hospital ICU.
- Continue to audit CAM-ICU assessments monthly and continue with staff star chart.
- Add more staff members to delirium team as champions.
- Roll out new early mobility protocol in August 2014.
What We Have Learned

- Leadership skills
- If at first you don’t succeed, buy your staff more swag, and try, try again.
- You are never alone when trying to create change. Rely on your peers and work together.
- The process of change and the necessity for organization, time management, and staff support
- No change is easy or quick. Hard work and perseverance yield the higher reward.
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References

References

References