March 6, 2018

Indiana Patient Safety Center
of the Indiana Hospital Association

Wake Up & the ABCDEF Bundle

March 6, 2018

IHAconnect.org/Quality-Patient-Safety
Indiana’s Bold Aim

To make Indiana the safest place to receive health care in the United States... *if not the world*
# Wake Up Webinars

<table>
<thead>
<tr>
<th>Event Title</th>
<th>Date</th>
<th>Time</th>
<th>Presenter(s)</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State of the State: State &amp; National Opioid Stats and Emergency Department Point Program</strong></td>
<td>January 23</td>
<td>3-4pm ET</td>
<td>Kaitlyn Boller, MHA &amp; Krista Brucker, MD</td>
<td>Emergency Dept personnel, LCSW, pharmacy, discharge planners, care coordinators, quality, educators</td>
</tr>
<tr>
<td><strong>Obstructive Sleep Apnea &amp; STOP BANG Assessment</strong></td>
<td>February 20</td>
<td>3-4pm ET</td>
<td>Abhinav Singh, MD</td>
<td>Medical Surgical Staff, Respiratory, Educators</td>
</tr>
<tr>
<td><strong>Sedation Management and Opioid Practices &amp; the ABCDEF Bundle</strong></td>
<td>March 6</td>
<td>3-4pm ET</td>
<td>Maryanne Whitney, Cynosure Health &amp; Jennifer Hittle, IU Health Arnette</td>
<td>ICU/Medical/Surgical/Procedural Staff &amp; Managers, Pharmacy, Respiratory, Educators</td>
</tr>
<tr>
<td><strong>Delirium Assessment, Prevention, &amp; Treatment</strong></td>
<td>March 20</td>
<td>3-4pm ET</td>
<td>Malaz Boustani, MD</td>
<td>Quality, ICU/Medical/Surgical Staff &amp; Managers, Pharmacy, Educators</td>
</tr>
</tbody>
</table>

Use the following to join each installment in the series:

**Dial in number:** (888) 390-3967  
**Participant link:** [https://join.onstreammedia.com](https://join.onstreammedia.com)  
**IHAconnect.org/Quality-Patient-Safety**
WAKE UP promotes opioid and sedation management to reduce unnecessary sleepiness and sedation.

- Informational State Survey
- Educational Webinars
- Online Resources
  - Webinar recordings, resource sheet, webinar information sheet and pre-written WAKE UP social media are available here on the IHAcconnect.org website: https://www.ihaconnect.org/patientsafety/Initiatives/Pages/UP-Campaign.aspx
Wake-Up Resources

- Social Media
- Resource Sheet
- Webinar Information
  - (click hyperlink above to access—also accessible on IHA website-Patient Safety Up Campaign)
- HIIN Wake UP Self-Assessment & Monitoring Tool
2018 Patient Safety Awareness Week

March 11-17, 2018

Patient Safety Awareness Week

Daily Topics

- Opioid Awareness
- Wake Up: Know Your Meds
- Get Up: Prevention of Falls
- Soap Up: Hand Hygiene
- Safe Antibiotic Usage
- Could it be Sepsis?
- Safe Infant Sleep Practices

Patient Safety Awareness Week Toolkit and IPSCresources.com

IHAnet.org/Quality-Patient-Safety
Polling Question #1

• What is your primary role within your organization?
  ▪ Infection Prevention
  ▪ Nursing Professional
  ▪ Laboratory Professional
  ▪ Medical Staff
  ▪ Environment Services / Housekeeping
  ▪ Social Worker
  ▪ Mental Health Professional
  ▪ Other
Polling Question #2

• **In your job, are you primarily**
  • ICU Staff?
  • Non-ICU Staff?
Objectives

Following this webinar:

1. Understand essential elements of Wake-UP
2. Identify processes in med surg that can enhance patient safety.
3. Identify objectives of ABCDEF Bundle
4. Identify processes to implement ABCDEF Bundle
5. Identify potential outcome measures for ABCDEF Bundle
# 1 Opioid & Sedation Management

ADE  Failure to Rescue  Delirium  Falls  Airway Safety  VTE  VAE

W A K E - U P

IHAconnect.org/Quality-Patient-Safety
1. Is my patient awake enough to get up?
2. Have I protected my patient from infections?
3. Does my patient need any medication changes?
Sleep vs Sedation

Is this normal sleep or dangerous sedation?
Not Just Sedatives and Opioids

- Antihistamines/anticholinergics
- Antipsychotics
- Some antidepressants
- Anti-emetics
- Muscle relaxants
Medications to avoid in those over 65yrs

- **Anticholinergics**: Benadryl®, Phenergan®, Vistaril®
- **Antispasmodic agents**: Donnata$, Bentyl®, Librax®, Probanthine®
- **Sleep aids**: Ambien®, Luminal®, Dalmane®, Nembutal®
- **Benzodiazepines**: Ativan®, Valium®, Xanax®, Librium®, Klonopin®
- **NSAIDS**: Advil®, Motrin®, Aleve®
- **Cardiac drugs**: Digoxin > 0.125mg/day, Procardia®, Catapres®

HIIN Script Up 1/30/18:

ICU Pitfalls of Sedatives and Analgesics

Sedatives and analgesics may contribute to:

• *Increased duration of mechanical ventilation*
• *Length of intensive care requirement*
• *Impede neurological examination*
• *May predispose to delirium*

Med/Surg Pitfalls of Sedatives and Analgesics

- Over sedation
- Transfer to ICU
- Hypoxic encephalopathy
- Death
MUST DO's
WAKE-UP MUST DO's

1. Establish Expectations

2. Pair POSS & Pain

3. Manage with Multiple Modalities
MUST DO #1
Establish Expectations

Goals of Pain Management:
• Relieve suffering
• Achieve early mobilization
• Reduce hospital length of stay

THE GOAL IS NOT ZERO PAIN!
OVER MEDICATED: Hibernating

UNDER MEDICATED: Not Happy

 совершенство

MUST DO #2
Pair POSS & Pain

Just Right!
POSS AKA “GOLDILOCKS SCALE”

- **S** - Sleep, easy to arouse
- **1** - awake and alert
- **2** - slightly drowsy
- **3** - frequently drowsy, drifts off to sleep during conversation
- **4** - somnolent, minimal or no response to stimulation
Pasero Opioid-Induced Sedation Scale (POSS) With Interventions*

S = Sleep, easy to arouse
Acceptable; no action necessary; may increase opioid dose if needed

1 = Awake and alert
Acceptable; no action necessary; may increase opioid dose if needed

2 = Slightly drowsy, easily aroused
Acceptable; no action necessary; may increase opioid dose if needed

3 = Frequently drowsy, arousable, drifts off to sleep during conversation
Unacceptable; monitor respiratory status and sedation level closely until sedation level is stable at less than 3 and respiratory status is satisfactory; decrease opioid dose 25% to 50%1 or notify primary2 or anesthesia provider for orders; consider administering a non-sedating, opioid-sparing nonopioid, such as acetaminophen or a NSAID, if not contraindicated; ask patient to take deep breaths every 15-30 minutes.

4 = Somnolent, minimal or no response to verbal and physical stimulation
Unacceptable; stop opioid; consider administering naloxone3,4; stay with patient, stimulate, and support respiration as indicated by patient status; call Rapid Response Team (Code Blue) if indicated; notify primary2 or anesthesia provider; monitor respiratory status and sedation level closely until sedation level is stable at less than 3 and respiratory status is satisfactory.

*Appropriate action is given in italics at each level of sedation.

1 If opioid analgesic orders or hospital protocol do not include the expectation that the opioid dose will be decreased if a patient is excessively sedated, such orders should be promptly obtained.
2 For example, the physician, nurse practitioner, advanced practice nurse, or physician assistant responsible for the pain management prescription.
3 For adults experiencing respiratory depression give intravenous naloxone very slowly while observing patient response (“titrate to effect”). If sedation and respiratory depression occurs during administration of transdermal fentanyl, remove the patch; if naloxone is necessary, treatment will be needed for a prolonged period, and the typical approach involves a naloxone infusion. Patient must be monitored closely for at least 24 hours after discontinuation of the transdermal fentanyl.
4 Hospital protocols should include the expectation that a nurse will administer naloxone to any patient suspected of having life-threatening opioid-induced sedation and respiratory depression.
Two Scales are Better than One for Narcotic and Sedation Administration

**PAIN ALONE**
- Risk factors may be absent
- Objective?
- Dosage based on number or range
- Patients and families understand the numeric dosing

**PAIN & POSS**
- Two scales allow for safer dosing
- High pain scale with high POSS scale – no narcotics
- High pain scale low POSS - med dose
MUST DO #3
Multi-Modal Pain Management

Pharmacological and Non-pharmacological
• **Combination of opioid and one or more other drugs**
  - acetaminophen (Tylenol, others)
  - ibuprofen (Advil, Motrin IB, others)
  - celecoxib (Celebrex)
  - ketamine (Ketalar)
  - gabapentin (Gralise, Neurontin)

• **Non-pharmacological interventions**

www.mayoclinic.org/pain-medications/art-20046452
WHAT DO WE DO AT HOME?

**Comfort measures:**

- Aromatherapy
- Massage
- Herbal tea
- Stress ball
- Music

- Pet therapy
- Warm compresses, blankets
- Ice packs
- Extra pillows
DO COMFORT ITEMS HELP?

• *These modalities can:*
  • Reduce anxiety
  • Reduce pain
• *Reducing anxiety can reduce pain*
• *Non-pharmacologic pain reduction methods reduce the need for pain medications*
DO HOSPITALS OFFER THESE?

https://www.pvmc.org/patients-visitors/pain-comfort-menu

http://www.hopkinsmedicine.org/the_johns_hopkins_hospital/services_amenities/services/pain-control-comfort-menu.html
POSITIVE RESULTS

• Pain scores
• Nausea scores
• Anxiety scores

All decreased by more than 50%

NEXT: Looking to see if opioid usage and opioid ADEs are both decreased.
Emma, age 13, had her 3rd surgery for a congenital foot deformity. Pain management was problematic, so both gabapentin and pet therapy were added to lower opioid doses with excellent results, allowing discharge to home 36 hours later.
CASE STUDY
Activity: What would you do? Chat in...

• You have a post-op patient who has assessed his pain as an 8 on a scale of 1-10.
• When you assessed the POSS 30 minutes ago, he scored a 3.
• Pair up.
• How would you approach this patient and family?
• Formulate your plan.
• Try it out.
• Discuss at the table.
**Must Do’s**

1. Establish Expectations

2. Pair POSS & Pain

3. Manage with Multiple Modalities

**Next Steps**

- Are you setting pain management expectations ("0" is not the goal) prior to admission?
- Are you asking about comfort level in addition to pain score?
- Are you using the Pasero Opioid-induced Sedation Scale (POSS) prior to and after opioid administration?
- Do you offer multimodal pain management; both pharmacologic and non-pharmacologic modalities?
Offer Multi-modal Pain Management: 50%

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pasero Opioid-Induced Sedation Scale (POSS) prior to an after opioid administration</td>
<td>66.67% 12</td>
</tr>
<tr>
<td>Offer multi-modal pain management - both pharmacologic and non-pharmacologic modalities</td>
<td>50.00% 9</td>
</tr>
<tr>
<td>Setting realistic pain management expectations prior to admission</td>
<td>44.44% 8</td>
</tr>
<tr>
<td>Asking about comfort level in addition to pain score</td>
<td>55.56% 10</td>
</tr>
<tr>
<td>Using teach-back methods with patients and families to enhance their knowledge and assist in setting pain management expectations</td>
<td>66.67% 12</td>
</tr>
<tr>
<td>STOP BANG for identifying Obstructive Sleep Apnea</td>
<td>27.78% 5</td>
</tr>
<tr>
<td>Richmond Agitation Sedation Scale (RASS)</td>
<td>72.22% 13</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td>Responses</td>
</tr>
</tbody>
</table>

Total Respondents: 18

If yes, do you use or complete the following? (Check all that apply)

- Pasero Opioid-induced Sedation Scale (POSS)
- Offer multi-modal pain management
- Setting realistic pain management expectations prior to admission
- Asking about comfort level in addition to pain score
- Using teach-back methods with patients and families to enhance their knowledge and assist in setting pain management expectations
- STOP BANG for identifying Obstructive Sleep Apnea
- Richmond Agitation Sedation Scale (RASS)
- Other (please specify)

IHAconnect.org/Quality-Patient-Safety
ABCDEF Bundle for ICU Liberation, Improved Survival & Reduced Brain Dysfunction

• Awakening Trials
• Breathing Trials
• Choosing the right sedatives & analgesia
• Delirium monitoring/management
• Early exercise/mobility
• Family engagement & empowerment
ABCDEF Bundle

Have you implemented the ABCDEF Bundle in your ICU?*

*excludes response of not applicable
mwhitney@cynosurehealth.org
Maryanne Whitney, RN, MSN, CNS
Improving Patient Outcomes with Bundles

Sarah Roth BSN, RN
Jen Hittle BSN, RN, CNML
Georgia Salazar BSN RN CCRN
Indiana University Health Arnett
Intensive Care Unit
Lafayette, IN

- 14 Bed Closed ICU
- Mixed Patient Population
- Open Heart Surgery Recovery, Trauma, Neurosurgery, Cardiac Medical, IABP, CRRT, Medical ICU patients
ABCDEF Bundle Improvement Collaborative

- 18 months long
- Goal to improve pain control and decrease sedative exposure and time on mechanical ventilation by:
  - Increasing time patients are free of delirium
  - Encouraging early mobilization
  - Engaging families to be involved in family member’s care
  - Using an online data collection tool to validate compliance
  - Implementing evidence-based care to boost teamwork

ABCDEF Bundle Improvement Collaborative

- The Collaborative was operating in three regions: the Southeast, the West Coast, and the Midwest
  - Any ICU was able to apply regardless of previous experience with bundle implementation
  - Data was collected and used to identify trends in:
    - Length of stay
    - Hours of mechanical ventilation
    - Improvements in team communication/interaction

Society of Critical Care Medicine (n.d.) Abcdef bundle improvement collaborative. Retrieved from: [http://www.iculiberation.org/About/collaborative/Pages/default.aspx](http://www.iculiberation.org/About/collaborative/Pages/default.aspx)
In 2013, The Society of Critical Care Medicine (SCCM) published the Clinical Practice Guidelines for the Management of Pain, Agitation, and Delirium in Adult Patients in the Intensive Care Unit:

- Multidisciplinary approach to managing pain, agitation/sedation, and delirium
- Utilizes assessment tools to target treatment
- Decrease sedation levels to allow active patient participation in ventilator weaning trials
- Implementing prevention strategies to avoid complications

# ICU Pain, Agitation, and Delirium Care Bundle

<table>
<thead>
<tr>
<th>PAIN</th>
<th>AGITATION</th>
<th>DELIRIUM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASSESS</strong></td>
<td><strong>Assess agitation ≥4x/day &amp; pm</strong>&lt;br&gt;Preferred agitation assessment tools:&lt;br&gt;● Patient able to self-report → NRS (0-10)&lt;br&gt;● Unable to self-report → BPS (0-12)&lt;br&gt;or CPOT (0-6)&lt;br&gt;Patient is in significant pain if NRS ≥ 4, BPS ≥ 5, or CPOT ≥ 3</td>
<td><strong>Assess agitation, sedation ≥4x/day &amp; pm</strong>&lt;br&gt;Preferred agitation assessment tools:&lt;br&gt;● RASS (-5 to +4) or SAS (1 to 7)&lt;br&gt;● NAM or suggest using brain function monitoring&lt;br&gt;Depth of agitation, sedation defined as:&lt;br&gt;● Agitated if RASS = -1 to -4, or SAS = 5 to 7&lt;br&gt;● Moderate and calm if RASS = 0, or SAS = 4&lt;br&gt;● Lightly sedated if RASS = -1 to -2, or SAS = 3&lt;br&gt;● Deeply sedated if RASS = -3 to -5, or SAS = 1 to 2</td>
</tr>
<tr>
<td><strong>TREAT</strong></td>
<td><strong>Treat pain within 30’ then reassess:</strong>&lt;br&gt;● Non-pharmacologic treatment—relaxation therapy&lt;br&gt;● Pharmacologic treatment:&lt;br&gt;→ Non-narcotic pain → IV opioids&lt;br&gt;→ IV or subcutaneous analgesics&lt;br&gt;→ Neuropathic pain → gabapentin or carbamazepine, +/- IV opioids&lt;br&gt;→ Sp A&amp;A repair, rib fractures → thoracic epidural</td>
<td><strong>Target sedation or DSI (Goal: patient painlessly follows commands without agitation):</strong>&lt;br&gt;● RASS ≤ -2 to 0, SAS ≤ 3 to 4&lt;br&gt;● If under sedated (RASS &gt;0) SAS &gt;4&lt;br&gt;ask/treat pain → treat w/sedatives prn (non-benzodiazepines preferred, unless ETOH or benzodiazepine withdrawal is suspected)&lt;br&gt;● If over sedated (RASS &lt;2, SAS &lt;3) hold sedatives until at target, then restart at 50% of previous dose</td>
</tr>
<tr>
<td><strong>PREVENT</strong></td>
<td><strong>Administer pre-procedural analgesia</strong>&lt;br&gt;and/or non-pharmacologic interventions (e.g., relaxation therapy)&lt;br&gt;● Treat pain first, then sedate</td>
<td><strong>Consider daily SST, early mobility and exercise when patients are at goal sedation level, unless contraindicated</strong>&lt;br&gt;● EEG monitoring if:&lt;br&gt;→ at risk for seizure&lt;br&gt;→ burst suppression therapy is indicated for ↑ ICP</td>
</tr>
</tbody>
</table>

ABCDEF Bundles to Improve Patient Outcomes

- Assess, Prevent, and Manage Pain
- Both Spontaneous Awakening Trials and Spontaneous Breathing Trials
- Choice of Analgesia and Sedation
- Delirium: Assess, Prevent and Manage
- Early Mobility and Exercise
- Family Engagement and Empowerment
A: Assess, Prevent, and Manage Pain

Assess
• Assess pain > 4x/ shift & PRN
• Significant pain with NRS >3 or CPOT >2

Prevent
• Administer pre-procedural interventions or analgesia
  • Treat pain first, then sedate

Treat
• Treat pain within 30 minutes of detecting and reassess
  • Incorporate both non-pharmacological and pharmacological treatments

# CPOT - Critical Care Pain Observation Tool

<table>
<thead>
<tr>
<th>INDICATOR</th>
<th>SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FACIAL EXPRESSION</strong></td>
<td></td>
</tr>
<tr>
<td>Relaxed, neutral</td>
<td>0</td>
</tr>
<tr>
<td>Tense</td>
<td>1</td>
</tr>
<tr>
<td>Grimacing</td>
<td>2</td>
</tr>
<tr>
<td><strong>BODY MOVEMENTS</strong></td>
<td></td>
</tr>
<tr>
<td>Absence of movements</td>
<td>0</td>
</tr>
<tr>
<td>Protection</td>
<td>1</td>
</tr>
<tr>
<td>Restlessness</td>
<td>2</td>
</tr>
<tr>
<td><strong>MUSCLE TENSION</strong> (evaluate by passive flexion and extension of upper extremities)</td>
<td></td>
</tr>
<tr>
<td>Relaxed</td>
<td>0</td>
</tr>
<tr>
<td>Tense, rigid</td>
<td>1</td>
</tr>
<tr>
<td>Very tense or rigid</td>
<td>2</td>
</tr>
<tr>
<td><strong>COMPLIANCE WITH VENTILATOR</strong> (intubated patients)</td>
<td></td>
</tr>
<tr>
<td>Alarms not activated; easy ventilation</td>
<td>0</td>
</tr>
<tr>
<td>Coughing but tolerating</td>
<td>1</td>
</tr>
<tr>
<td>Fighting ventilator</td>
<td>2</td>
</tr>
<tr>
<td><strong>VOCALIZATION</strong> (extubated patients)</td>
<td></td>
</tr>
<tr>
<td>Talking in normal tone or no sound</td>
<td>0</td>
</tr>
<tr>
<td>Sighing, moaning</td>
<td>1</td>
</tr>
<tr>
<td>Crying out, sobbing</td>
<td>2</td>
</tr>
</tbody>
</table>

**CPOT range = 0 – 8; CPOT > 2 is significant**

B: Both Spontaneous Awakening Trials & Spontaneous Breathing Trials

- Daily spontaneous awakening trails (SAT) showed a decrease in the duration of mechanical ventilation
  - Pause sedation infusion until patient is awake
  - Restart at 50% prior dose

Society of Critical Care Medicine. (n.d.) Implementing the b component of the abcdef bundle. Retrieved from:
SAT Safety Screen

- No active seizures
- No alcohol withdrawal
- No agitation
- No paralytics
- No myocardial ischemia
- Normal intracranial pressure

SAT Failure

- Anxiety, agitation, or pain
- Respiratory rate > 35/min
- Oxygen saturation <88%
- Respiratory distress
- Acute cardiac arrhythmia

B: Both Spontaneous Awakening Trials & Spontaneous Breathing Trials

- Spontaneous breathing trials (SBT) Increases opportunity for effecting independent breathing
  - Duration a minimum of 30 minutes
- Requires communication and coordination between RN, RT, and MD

• No agitation
• Oxygen saturation ≥ 88%
• FiO2 ≤ 50%
• PEEP ≤ 7.5 cm H2O
• No myocardial ischemia
• No vasopressor use
• Inspiratory efforts

• Respiratory rate > 35/min
• Respiratory rate < 8/min
• Oxygen saturation < 88%
• Respiratory distress
• Mental status change
• Acute cardiac arrhythmia

C: Choice of Analgesia and Sedation

- Assess often with goal of:
  - Pain: 3 or less (NRS) or 2 or less (CPOT)
  - Sedation: RASS = +1 to -2
  - Delirium: CAM-ICU Negative
- Treat pain FIRST then sedate
- Not all mechanically ventilated patients need to be started on IV opioids and/or sedation infusions following intubation
- Non-benzodiazepine sedative are associated with better ICU outcomes

<table>
<thead>
<tr>
<th>Score</th>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>+4</td>
<td>Combative</td>
<td>Overtly combative, violent, immediate danger to staff</td>
</tr>
<tr>
<td>+3</td>
<td>Very agitated</td>
<td>Pulls or removes tube(s) or catheter(s), aggressive</td>
</tr>
<tr>
<td>+2</td>
<td>Agitated</td>
<td>Frequent nonpurposeful movement, fights ventilator</td>
</tr>
<tr>
<td>+1</td>
<td>Restless</td>
<td>Anxious but movements not aggressively vigorous</td>
</tr>
<tr>
<td>0</td>
<td>Alert and calm</td>
<td></td>
</tr>
<tr>
<td>-1</td>
<td>Drowsy</td>
<td>Not fully alert but has sustained awakening (eye opening/eye contact) to voice (≥10 seconds)</td>
</tr>
<tr>
<td>-2</td>
<td>Light sedation</td>
<td>Briefly awakens to voice with eye contact (&lt;10 seconds)</td>
</tr>
<tr>
<td>-3</td>
<td>Moderate sedation</td>
<td>Movement or eye opening to voice (but no eye contact)</td>
</tr>
<tr>
<td>-4</td>
<td>Deep sedation</td>
<td>No response to voice but movement or eye opening to physical stimulation</td>
</tr>
<tr>
<td>-5</td>
<td>Unarousable</td>
<td>No response to voice or physical stimulation</td>
</tr>
</tbody>
</table>

**Richmond Agitation-Sedation Scale (RASS)**

- **Verbal Stimulation**
  - Briefly awakens to voice with eye contact (<10 seconds)
  - Movement or eye opening to voice (but no eye contact)
- **Physical Stimulation**
  - No response to voice but movement or eye opening to physical stimulation
D: Delirium: Assess, Prevent, and Manage

- Utilize Confusion Assessment Method for ICU (CAM-ICU)
- When delirium is present look for reversible causes
- Intervene per nursing protocol
  - Consult pharmacy for medication adjustments
  - Immobility
  - Visual and hearing impairments
  - Nutrition and dehydration
  - Pain

Confusion Assessment Method for the ICU (CAM-ICU) Flowsheet

1. Acute Change or Fluctuating Course of Mental Status:
   - Is there an acute change from mental status baseline? OR
   - Has the patient’s mental status fluctuated during the past 24 hours?
   - YES

2. Inattention:
   - “Squeeze my hand when I say the letter ‘A’.”
   - Read the following sequence of letters: SAVE AHAART or CASABLANCA or ABABADADAAY
   - ERRORS: No squeeze with ‘A’ & Squeeze on letter other than ‘A’
   - If unable to complete Letters → Pictures
   - > 2 Errors

3. Altered Level of Consciousness
   Current RASS level
   - RASS = zero

4. Disorganized Thinking:
   1. Will a stone float on water?
   2. Are there fish in the sea?
   3. Does one pound weigh more than two?
   4. Can you use a hammer to pound a nail?
   - Command: “Hold up this many fingers” (Hold up 2 fingers)
   - “Now do the same thing with the other hand” (Do not demonstrate)
   - OR “Add one more finger” (If patient unable to move both arms)
   - > 1 Error

CAM-ICU negative
NO DELIRIUM

CAM-ICU negative
NO DELIRIUM

CAM-ICU positive
DELIRIUM Present

CAM-ICU negative
NO DELIRIUM

0 - 2 Errors
E: Early Mobility and Exercise

- Treatment based on patients prior activity and goals
- Coordination between PT, RN, and RT to encourage patients to perform active movements if possible
- New study suggest that in the ICU there is a 3%-11% strength loss every day in bed
- Early mobility has shown:
  - Decrease in ICU and hospital length of stay
  - Improved overall physical function
  - Decreased during of MV
  - Decrease incidence of delirium

F: Family Engagement and Empowerment

- Keep ICU families informed and involved in decision making by allowing them to participate in rounds and allowing them to be involved in patient care.

- Patient benefits:
  - Decrease in anxiety, confusion, agitation
  - Decrease in CV complications and ICU LOS
  - Increase in feelings of security and patient satisfaction
  - Increase in quality and safety

Nursing Led Rounds

- Multidisciplinary Daily Rounding in the ICU
  - Patient primary nurse
  - ICU physician
  - Charge nurse
  - Pharmacist
  - Respiratory therapist
  - Dietician
  - Chaplain
  - Patient’s family members
Implementation for the Study

- Our ICU has always had multidisciplinary rounds which were intermittently nurse led
  - Completed daily at 1000
- Allowed for easier implementation of “F” bundle since family participation was already encouraged
  - Staff is extremely engaged in this process and encourage/educate families to attend rounds
  - Allows family time to come with questions/concerns/suggestions
Roll Out

- Bundle champions
  - Staff felt a sense of ownership
- Nursing staff education of bundles
  - Establish knowledge base
  - Why are bundles important?
Barriers to Bundle Implementation

- Resistance to change
  - Getting staff on board
- Lack of communication between nursing staff and physicians
  - Rolling out bundles individually vs all at once
- Multidisciplinary coordination
  - All staff needed to implement the bundles on the same page
- Patient resistance
  - Unaware of benefits to bundles (ex. Mobility)
Ways to Improve

- Nursing education
  - Education about the bundles prior to initiation of study
  - Allowing nursing staff to feel confident with implementation
- Patient education
  - Why the bundles are implemented and how the patient can/will benefit
- Communication between all team members, patient, and family
  - Allows for all involved to understand the plan of care
    - Coordination between all disciplines involved in care
- Communication with other units involved in the study
  - Allows for optimal bundle implementation and results
Bundle Implementation Wins

- Decreased length of stay = 0.5 days
- Decreased ventilator days by 50%
- Increased early mobility by 18%
- Decreased delirium in patients by 20%
- Decreased mortality rate
- Increased rate of patients discharged alive
- Post AACN HWE scores increased
A: Assess, Prevent, and Manage Pain

Pain Asmt Compliance out of All ICU Days
B: Both SAT + SBT

SAT Performance Out of All ICU Days on Sedation
B: Both SAT + SBT

Day on MV

SBT Performance Out of All ICU
B: Both SAT + SBT

SAT Prior to SBT Out of All Days with SAT + SBT

Retro, M7, M8, M9, M10, M11, M12, M13, M14, M15, M16, M17, M18, M19
C: Choice of Analgesia and Sedation

Sedation Asmt Compliance Out of All ICU Days on Sedation
D: Delirium: Assess, Prevent, and Manage

Delirium Asmt Compliance Out of All ICU Days
Early Mobility Performance Out of All ICU Days

E: Early Mobility and Exercise
AITCS Scores

Pre N= 60

Post N= 36

Partnership
Cooperation
Coordination
AACN Healthy Work Environment Scores

Skilled Communication
True Collaboration
Effective Decision Making
Appropriate Staffing
Meaningful Recognition
Authentic Leadership

Pre N= 60
Post N= 32

AACN Healthy Work Environment Scores
Team Awards

- Society of Critical Care Medicine - Top Team Performance Awards for:
  - Midwest Region Overall ABCDEF Bundle Compliance/ Performance
  - “F” Bundle Element
  - “B” Bundle Element

- Society of Critical Care Medicine - Certificate of Achievement for Completion of the ICU Liberation ABCDEF Bundle Improvement Collaborative
References


References


Questions?

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Jen Hittle, BSN, RN, CNML
Q2 We use a standardized delirium screening tool for assessing and monitoring delirium or confusion.

Delirium Assessment, Prevention, & Treatment

- March 20, 3-4pm ET: Malaz Boustani, MD
- Audience: Quality, ICU/Medical/Surgical Staff & Managers, Pharmacy, Educators

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