HRET HIIN VAE Sprint #2

May 14, 2019
1:00 p.m. – 2:00 p.m. CT
Welcome and Introductions
Kavita Bhat, MD, MPH
Performance Improvement Coach, AHA
Hello, My Name is…

- Name
- Hospital/State Hospital Association
- City, State
AGENDA

- Welcome and Introductions
- VAE Hospital Pre-Assessment Results
- The ABC Components of the ABCDEF Bundle
- Initial VAE Discoveries
- Questions and Answers
- Review Expectations
- Wrap Up
Why Are We Here?

24 States

57 Hospitals
VAE Pre-Assessment Results

Kavita Bhat, MD, MPH
Program Manager, HRET

Maryanne Whitney, RN, CNS, MSN
Improvement Advisor, Cynosure

Barb DeBaun, RN, MSN, CIC
Improvement Advisor, Cynosure

American Hospital Association
Advancing Health in America
36 hospital participants fully completed the VAE pre-assessment!!

21 to go! Complete the pre-assessment [here](#)

**Takes 5 minutes!**
VAE Pre-Assessment Results

Has your hospital shifted from the VAP bundle to the ABCDEF bundle?

Key Takeaways:

- 43% of participants are not thinking about shifting from the VAP bundle to the ABCDEF bundle.
- 22% of participants are just starting to plan shifting from the VAP bundle to the ABCDEF bundle.
- 24% of participants have shifted from the VAP bundle to the ABCDEF bundle in multiple units.
VAE Pre-Assessment Results

Key Takeaways:
• 73% of participants are testing HOB 30-40 degree compliance or have already spread it to multiple units.
VAE Pre-Assessment Results

Does your hospital use Endotracheal Tube (ETT) with subglottic secretion management?

Key Takeaways:
• 63% of participants are testing ETT with subglottic secretion management or have already spread it to multiple units.
• 29% of participants are not thinking about using an ETT with subglottic secretion management.
Does your hospital provide oral care every 4 hours for mechanically ventilated patients?

Key Takeaways:
• 87% of participants are testing oral care every 4 hours for mechanically ventilated patients or have already spread it to multiple units.
Does your hospital have standard ventilation orders for 6-8 ml/kg Tidal Volume (TV)?

Key Takeaways:
- 70% of participants are testing standard ventilation orders for 6-8 ml/kg Tidal Volume or have already spread it to multiple units.
- 19% of participants are not thinking about having standard ventilation orders for 6-8 ml/kg Tidal Volume.
VAE Pre-Assessment Results

Does your ICU treat pain prior to administering sedation?

Key Takeaways:
• 71% of participants are testing treating pain prior to administering sedation or have spread this practice to multiple units.
Does your ICU administer three bolus doses of sedation prior to hanging an infusion (when using benzodiazepines)?

Key Takeaways:
• 62% of participants are not thinking about administering three bolus doses of sedation prior to a hanging infusion.
VAE Pre-Assessment Results

Does your ICU target sedation using an agitation score such as RASS (Richmond Agitation Assessment)?

Key Takeaways:
- 92% of participants are testing ICU target sedation using an agitation score such as the RASS or have already spread it to multiple units.
VAE Pre-Assessment Results

Does your ICU use benzodiazepines as the first line agent for sedation?

Key Takeaways:
• 78% of participants sometimes use benzodiazepines as the first line agent for sedation.
VAE Pre-Assessment Results

Does your ICU encourage patient/family participation in bedside reporting and/or shift change huddles?

- 21% Not thinking about it
- 16% Just starting to plan
- 8% Testing on one unit
- 55% Spread to multiple units

Key Takeaways:
- 63% of participants are testing in one unit or have spread the practice of patient/family participation in bedside reporting and/or shift change huddles to multiple units.
- 21% of participants are not thinking about practice of patient/family participation in bedside reporting and/or shift change huddles to multiple units.
VAE Pre-Assessment Results

Does your ICU provide information to patients/family members regarding what to expect during the stay?

Key Takeaways:
- 89% of participants are testing or have already spread the practice of providing information to patients/family members regarding what to expect during the stay in multiple.
Key Takeaways:

- 87% of participants conduct coordinated awakening and breathing trials to decrease VAEs.
- 61% of participants conduct delirium screening to decrease VAEs.
- 32% of participants utilize sleep enhancement strategies to decrease VAEs.
- 76% of participants utilize progressive mobility to decrease VAEs.
Thank you for your commitment!
ABCDEF Bundle: science & philosophy
(based on 40 Lancet, JAMA, NEJM papers + ~350 others)

• Analgesia: assess, prevent, manage pain
• Both SATs and SBTs (stop drugs, stop vent)
• Choice of Analgesia and Sedation
• Delirium: assess, prevent, manage
• Early mobility and exercise, Environment
• Family engagement and empowerment

Ely EW, CCM 2017;45:321-30
Delirium Management: using Dr. DRE

**D**isease *r.*emediation
* e.g., Sepsis, COPD, CHF

**Drug** **R**emoval
* e.g., SATs, avoiding benzodiazepines

**E**nvironment
* e.g., mobilization, sleep, day/night, hearing aids, eye glasses, noise reduction
In *Crime and Punishment*, Dostoyevsky writes…

on family presence and delirium reduction:
"Until today the patient had been in delirium and...no doubt the presence of his family [had] a favourable effect on his recovery and distracted his mind."

Rosa RG, CCM 2017;45:1660-1667
# A-E and A-F Bundle References

**ABCDE Bundle**


**ABCDEF Bundle**

15. Pun BT, *Crit Care Med* 2019; 47: 3-14
Survival and Delirium-Coma Freedom
Implementing ABCDEF Bundle in >6,000 patients

Mortality Improvement
Delirium and Coma Freedom

NOTE: Adjusted for age, APACHE III, and mechanical ventilation
7 California Hospitals, Interprofessional QI Implementation project

Barnes-Daly MA, CCM 2017;45:171-8
Caring for Critically Ill Patients with the ABCDEF Bundle: Results of the ICU Liberation Collaborative in Over 15,000 Adults

Brenda T. Pun, DNP, RN, FCCM¹; Michele C. Balas, PhD, RN, CCRN-K, FCCM, FAAN²; Mary Ann Barnes-Daly, MS, RN, CCRN-K, DC³; Jennifer L. Thompson, MPH⁴; J. Matthew Aldrich, MD⁵; Juliana Barr, MD, FCCM⁶; Diane Byrum MSN, RN, CCRN-K, CCNS, FCCM⁷; Shannon S. Carson, MD⁸; John W. Devlin, PharmD, FCCM⁹; Heidi J. Engel, PT, DPT¹⁰; Cheryl L. Esbrook, OTR/L, BCPR¹¹; Ken D. Hargett, MHA, FAARC, FCCM¹²; Lori Harmon, RRT, MBA¹³; Christina Hielsberg, MA¹⁴; James C. Jackson, PsyD¹⁵; Tamra L. Kelly, BS, RRT, MHA¹⁶; Vishakha Kumar, MD, MBA¹⁷; Lawson Millner, RRT¹⁸; Alexandra Morse, PharmD¹⁹; Christiane S. Perme, PT, CCS, FCCM¹⁰; Patricia J. Posa, BSN, MSA, CCRN-K¹¹; Kathleen A. Puntillo, PhD, RN, FAAN, FCCM¹²; William D. Schweickert, MD¹³; Joanna L. Stollings, PharmD, FCCM¹⁴; Alai Tan, PhD¹⁵; Lucy D’Agostino McGowan, PhD¹⁶; E. Wesley Ely, MD, MPH, FCCM¹⁷

Sponsored by the SCCM via The Moore Foundation
ICU Liberation Collaborative

- Gordon Moore Foundation (Intel Billionaire)
- SCCM (Sepsis, ICU Liberation, Thrive)
- Aug 2015 to April 2017
- 68 Adult American ICUs, 10 Pediatric
- Medical, Surgical, Cardiac, Neuro ICUs
- ABCDEF Bundle implementation
- 15,226 patients
- All regression models adjusted for 18 confounders chosen \textit{a priori}
ABCDEF bundle performance... improves ICU discharge
ABCDEF bundle performance ... improves hospital discharge
Performance...reduces death
Performance improves...
comatose, delirium, restraints
Performance increases reported pain
Performance improves... time on ventilation
Performance reduces... 
ICU readmission and NH transfers

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**ICU Readmission**

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<th>Adjusted Probability of Outcome</th>
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**Discharge to Facility**

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Initial VAE Discoveries

Maryanne Whitney, RN, CNS, MSN
Improvement Advisor, Cynosure
Barb DeBaun, RN, MSN, CIC
Improvement Advisor, Cynosure
## VAE PROCESS IMPROVEMENT DISCOVERY TOOL

### VENTILATOR-ASSOCIATED EVENT (VAE)

The Process Improvement Discovery Tool is meant to help hospitals provide safer patient care by completing an assessment to identify process improvement opportunities. Hospitals can use the results to develop specific strategies to address gaps and identify resource needs. Please complete the tool using patient charts that align with this specific topic.

**Instructions:**
1. Review the charts for 72 hours prior to the VAE. If the answer to the question is ‘YES’, mark an X in the box. Leave the box empty if there is no documentation that this important process occurs.
2. The processes with the most blank boxes could be a priority focus.
3. Do NOT spend more than 20-30 minutes per chart!

### Process

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### Core Infection Compliance

- HOB was maintained at 30-45 degrees
- Oral care performed every 4 hours
- Suctioning of ETT present
- Patient was ventilated with 6-60 ml/kg of delivered TV or less, for more than 23 hours/day

### Treatment and Screening

- Patient was treated for pain prior to receiving sedation
- Patient received 3 doses of sedative prior to beginning an infusion (if bronchoscopy used)
- Patient did NOT receive a bronchoscopy
- If patient DID receive sedation, it was goal directed, targeting a RASS score of -3 to +3
- Patient had a daily coordinated SAT & SST
- Patient was screened for delirium every shift

### Sleep/Activity/Transportation

- Patient had concentrated sleep (e.g. 6 to 8 hours total)
- Patient was mobilized to his/her highest level of functional capacity every day
- If patient was transported off the unit, a portable ventilator was used
What did you find?
What are some ideas for change & moving forward?

What does your hospital do well/what needs improvement?

What trends did you find?
Expectations
Kavita Bhat, MD, MPH
Performance Improvement Coach, AHA
Hospital Expectations

✓ Select 1 VAE lead for the sprint
✓ Accept invites and participate in the 3 HRET HIIN VAE Sprint virtual events
✓ Complete pre-assessment (link here)
✓ Utilize the VAE Process Discovery Tool and submit it to your state partner
✓ Participate in 1 coaching session with their State Partner
✓ Complete post-sprint assessment

6 Easy Steps!
State Partner Expectations

- Accept invites and participate in the 3 HRET HIIN VAE Sprint virtual events

- Follow-up with hospitals to identify a lead for the sprint and remind them of hospital expectations throughout the sprint. Track your registered hospitals using the collaborative tracking tool.

- Schedule 1 coaching session with hospitals session of one-on-one coaching with hospitals utilizing the VAE Sprint Coaching Guide. Submit completed hospital Process Discovery Tool and completed coaching guide to kbhat@aha.org
What should I complete before the next virtual event?

**Hospitals**

✓ Submit your completed VAE Process Discovery Tool to your state partner.
✓ Participate in a coaching call with your state partner.
✓ Be ready to share your VAE successes and challenges on the next virtual event.

**State Partners**

✓ Have a coaching call with each of your hospitals.
✓ Submit the VAE Process Discovery Tool and Coaching Guide to kbhat@aha.org by June 17.
✓ Be ready to share your VAE successes and challenges on the next virtual event.
HRET HIIN VAE Sprint Virtual Event Schedule

- VAE #3: Monday, June 24, 2019 (1-2 PM CT) - Register here.
- VAE Office Hours: Tuesday, June 25 (1-2 PM CT) – Link Forthcoming
Questions?
thank you!