VAE Best Practice from Navicent Health

On a recent HRET HIIN webinar for state hospital associations, Navicent Health Medical Center in Georgia shared its journey to decrease harm from Ventilator Associate Events (VAE) VAC and IVAC. Using diligent monitoring of their data, direct observation of practice and root cause analysis, they were able to decrease VAE in five audit ICUs by 51.7% from baseline, decrease transport related VAEs by 79%, and achieve an average of 98% ventilator bundle compliance. The interventions they shared can be grouped into 3 areas:

Equipment

• Electronic Hand Hygiene monitoring system implemented
• Purchased additional transport ventilators, portable suction regulators, cuff pressure monitoring tools, and batteries for the portable ventilators (many of the batteries were no longer functioning properly)
• Bariatric patient chairs ordered
• Hi-Lo ETT instituted for all trauma patients as these individuals may require prolonged intubation. Aspiration is the primary cause of pneumonia; continuous suctioning via Hi-Lo prevents micro aspirations around the cuff.

Education

• Educated Respiratory staff on NHSN criterion
• Re-Educated staff on VAE bundle and providing details as to why we do what we do
• Computer based training of Mobility program
• Back to the basics Head of the Bed up, feedings stopped timely, (portable suction utilized if HOB elevation is contraindicated) strict spinal patients

Practice, Protocols & Orders

• Pain Agitation and Delirium (PAD) & Mobility built into the electronic medical record
• Pain Agitation and Delirium protocol implemented via paper
• Sedation was identified as a barrier to mobility
• Trauma group made necessary adjustments to their Pain Agitation and Delirium order sets to decrease sedation
• Piloted Transport Protocol - Performed tracers to identify any additional barriers
• Mobility pilot (Therapist assigned to 2 ICU units)
• Intensivist model expanded to 3 ICUs
• Discovered that the majority of Bundle compliance was extracted from the electronic medication record. The committee voted to have staff perform direct observation of bundle compliance at the bedside.

Data Monitoring

• RCA for any event or change in data
• RCA deep dives discovered:
    o 76% of events were associated with transports off the unit for diagnostics (within 4 days of the event) revealed respiratory was breaking the circuit for transports; barriers not enough transport ventilators, weak ventilator batteries, staff convenience
    o un-timely documentation triggered several of our events. Unless, documenting real time; the time would have to be changed to the appropriate time if documenting late.
• Re-started Cuff Pressure monitoring during respiratory rounds to prevent micro-aspirations. Discovered pressure checks were no longer being done due to lack of equipment.