

Early Extubation After Cardiac Surgery: An Evidence-Based, Nurse-Driven Protocol

PICOT Question

In intubated post-operative cardiac surgery patients, how does a nurse-driven standardized extubation protocol compared to no standardized protocol affect extubation rates within 6 hours post-operative?

Background & Significance

Early extubation is defined as:

- Removal of endotracheal tube within six hours of end anesthesia time

Early extubation of post-operative cardiac surgery patients has been associated with:

- Shorter ICU & hospital stays
- Reduced mortality
- Decreased resource use
- Safe & effective in elderly patients with no increased risk of reintubation

Opportunity to perform early extubation is frequently missed due to:

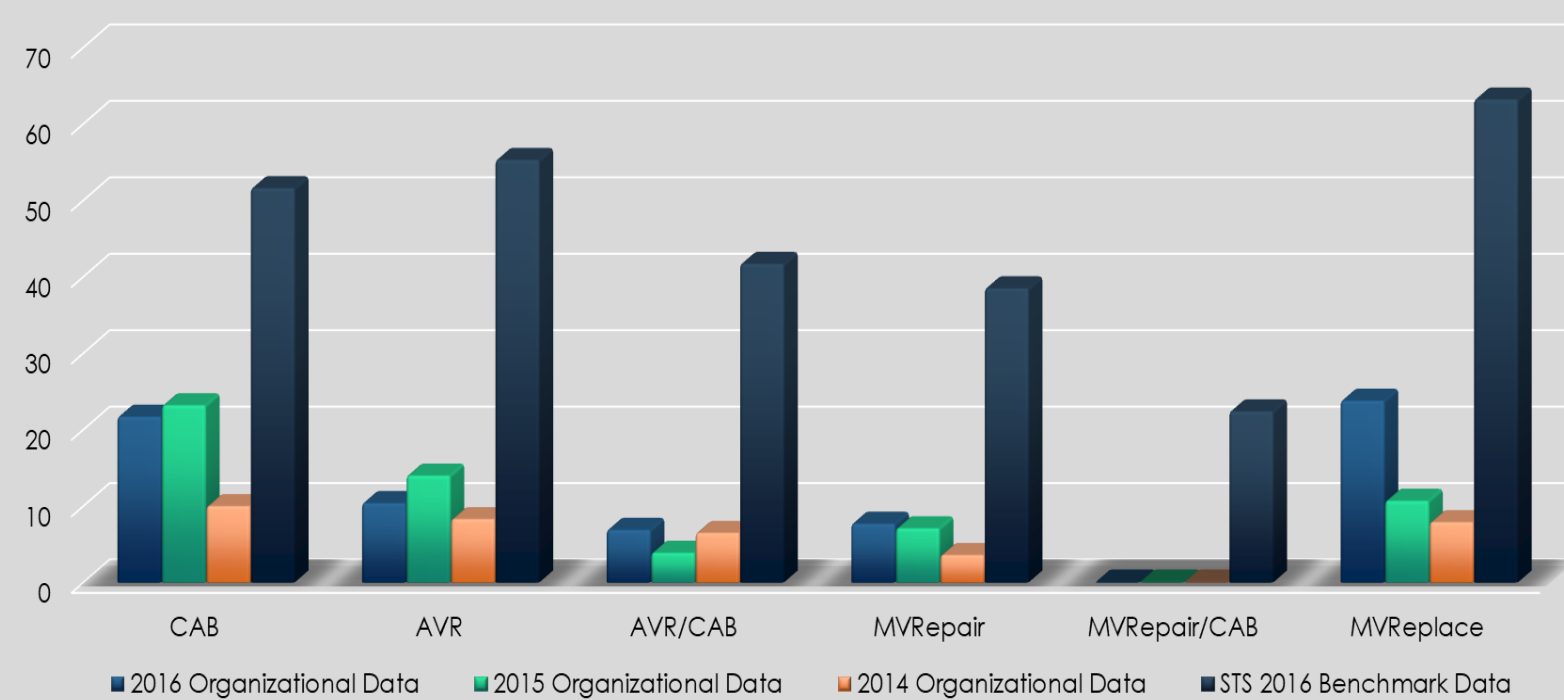
- Lack of early extubation protocol to standardize practices
- Lack of multidisciplinary team communication
- Excessive use of analgesics and sedatives

As few as 12% of cardiac surgery patients are extubated within 6 hours in the United States

Consequently, post-operative ventilation exceeding 24 hours is an important performance measure published by the National Quality Forum in the United States

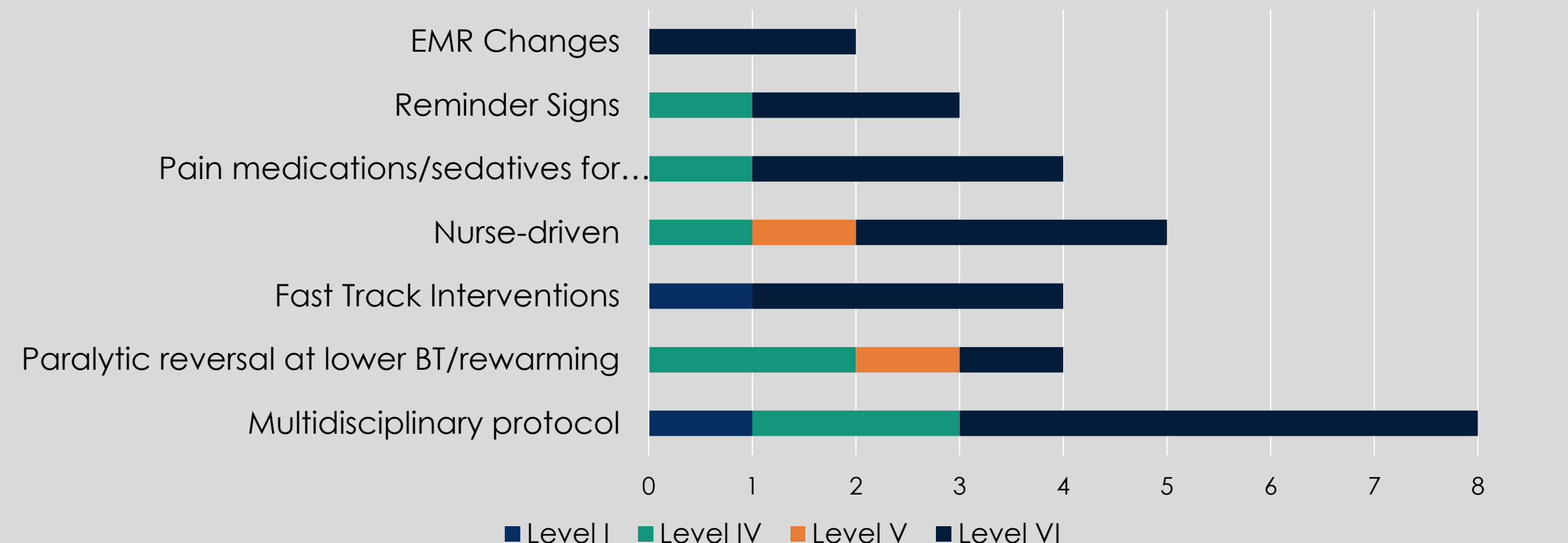
Baseline Organizational Data

% Patients Extubated < 6 hrs Compared to STS Benchmark



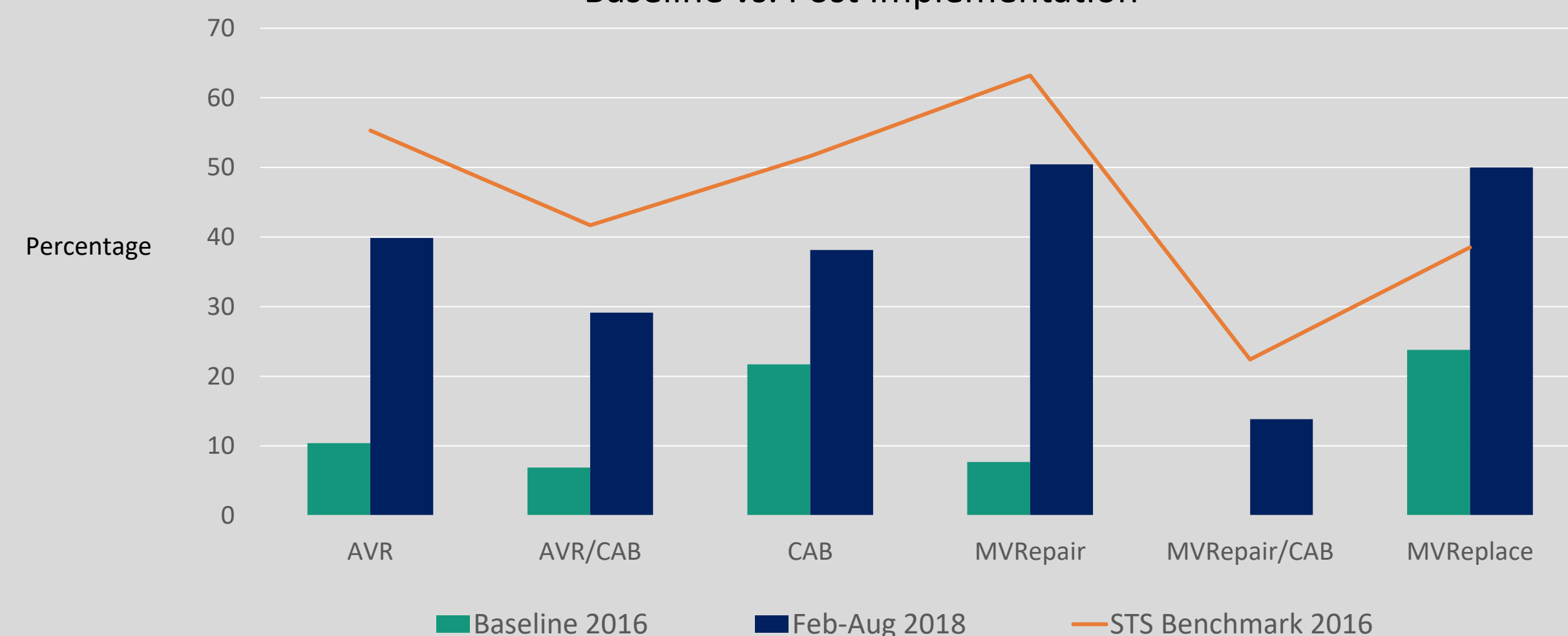
STS = Society of Thoracic Surgeons

Critical Appraisal: Recommendations from the Research vs. Level of Evidence

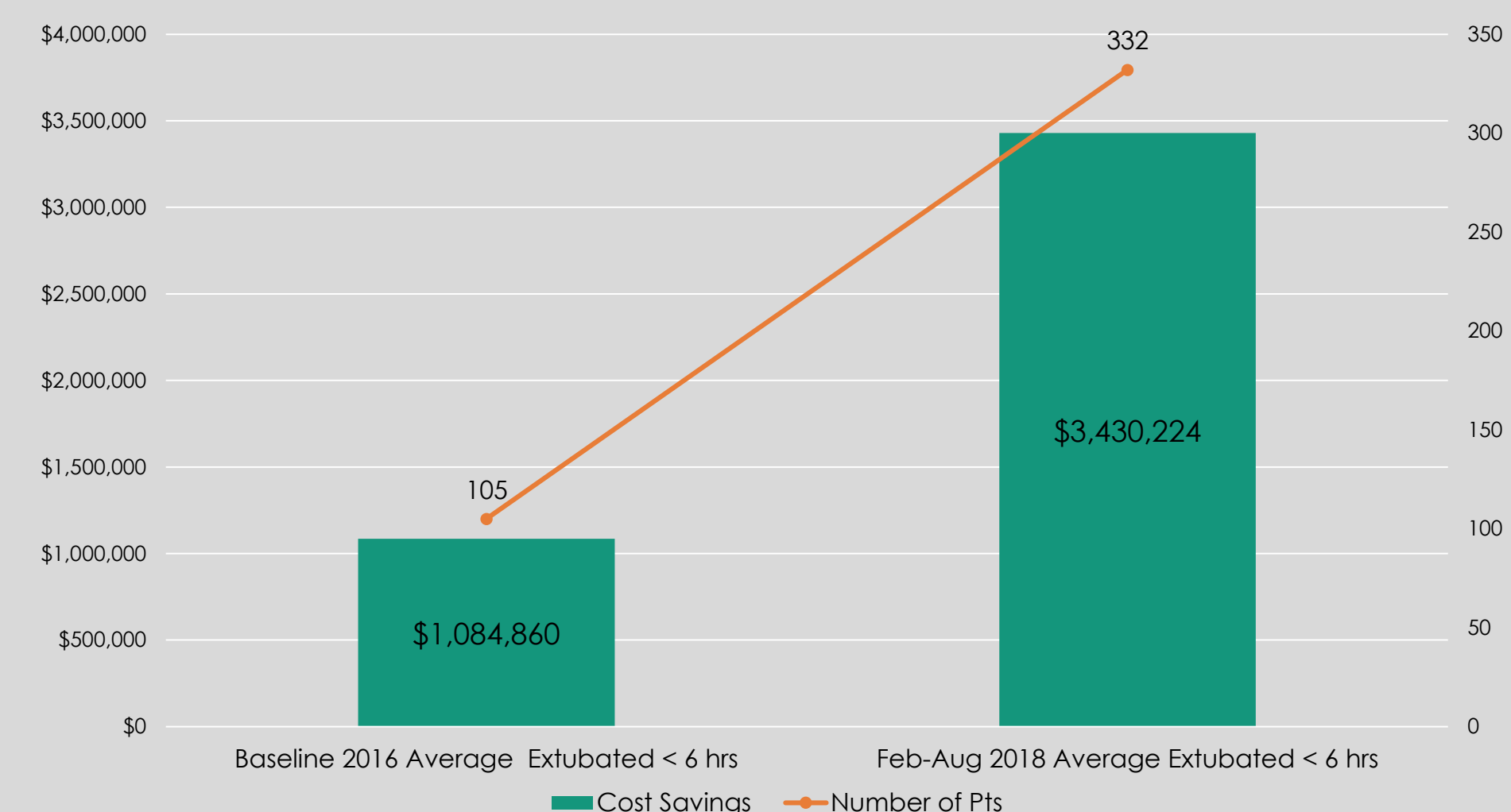


Outcomes

Percentage Extubated < 6 hrs Post-Operative
Baseline vs. Post Implementation



Outcomes: Patients Extubated < 6 hrs



Sustainability

Nurse-driven protocol built into Cardiac Surgery Order Set within the EMR

CTICU Orientation now includes nurse-driven protocol for early extubation

Standard of Care within the CTICU: Built into EMR and CTICU policy

Culture Change:

- Empowering and engaging the direct care RNs in the entirety of the process
- Early Extubation Committee; use for professional development on clinical ladder

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