



Healthcare Organization Commitment

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Position

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Commitment Details

Commitment Name

APSS #10: Reducing Non-ICU Codes

What Patient Safety Challenge does your Commitment address?

Challenge 10 - Systematic prevention and resuscitation of in-hospital cardiac arrest

Commitment Start Date

01/07/2008

How Many Hospitals Will This Commitment Represent

Commitment Summary

Reducing preventable deaths by recognizing the early signs of pediatric deterioration requires a multi-disciplinary, multi-specialty collaborative team. CHOC Children's began work on this topic nearly a decade ago by proof of concept (which was positive), followed by implementation of a Rapid Response Team, Pediatric Early Warning System, and more recently, a "Watcher Program," each focusing on ever-earlier detection and mitigation of patient deterioration.

Commitment Description & Detail

In the first two years of the Reducing Non-ICU Codes effort, non-ICU codes dropped by 85%. Gratifyingly, they have remained at this lower rate for the past 9 years. As an example, there were only 6 total non-ICU arrests last fiscal year. Moreover, the great bulk of the remaining events are respiratory events; cardiac arrests have become vanishingly small. As an example of the latter, CHOC has achieved one interval of >1000 days between Non-ICU cardiac arrests. We calculate there have been 433 avoided codes in hospitalized CHOC children since the inception of this effort. In alignment with the Patient Safety Movement Foundation's Actionable Patient Safety Solutions (APSS) checklist, CHOC Children's Hospital has completed and implemented the below checklist items.

Action Plan

- An institutional resuscitation outcome program should target preventable deaths for a particular hospital or healthcare organization.
- A multi-disciplinary institutional group should be designated as primarily responsible for the resuscitation program.
- The CHOC Code White Committee oversees resuscitation and related escalation and deterioration detection and prevention activities
- A formal mechanism for input data (Afferents) should be identified. This should include both external sources of information, such as guidelines and scientific literature, as well as internal (institutional) data.
- The institutional ROSC should have input into the Efferent actions in response to Afferent data and perceived institutional resuscitation needs.
- An effective resuscitation program will engage individual providers and enhance their personal sense of ownership and accountability. Ultimately, this program should become the primary vehicle to reduce preventable deaths and ensure an institutional culture of safety.
- Outcome data should be presented to the hospital medical executive board bimonthly.
- An organized approach to data collection and performance improvement should target various etiologies of cardiopulmonary arrest with regard to reducing arrest incidence, increasing arrest survival and improving end-of-life discussions with patients and families.
- Institutional resuscitation protocols should consider available evidence, technology, and performance improvement data.
- Provider training should ensure optimal resuscitation performance and be specific to provider type and clinical unit.
- Cardiopulmonary arrest resuscitation should emphasize optimal chest compressions and controlled ventilations as recommended by the AHA in their ACLS protocol.
- Post-resuscitative care should focus on optimizing supportive critical care and consideration of

age-appropriate temperature management. -End-of-life discussions should provide patients and families with compassionate but realistic expectations regarding goals of therapy and various therapeutic options. -Cardiopulmonary arrest prevention should emphasize early recognition of the deteriorating patient by technology that can present an early warning system. -Perfusion technologies include sphygmomanometry, ECG, capnometry, clinical assessment (mental status, capillary refill, pulse quality, extremity temperature), pulse oximetry including related perfusion indices, laboratory measures of acidosis (pH, base deficit, lactate, anion gap), and newer modalities (near-infrared spectroscopy, heart-rate variability). -Oxygenation technologies include pulse oximetry, blood gas analysis, near-infrared spectroscopy, and clinical assessment. -Ventilation technologies include respiratory volumetrics (tidal volume, respiratory rate), blood gas analysis, capnometry, capnography, apnea monitoring, transcutaneous CO2 monitoring, and clinical assessment.

Commitment Timeline

CHOC Children's will report progress to the PSMF on eliminating preventable Non-ICU codes and deaths on an annual basis. Our commitment to this topic and APSS will be ongoing.

Impact Details

Lives Saved

Predicted Lives Spared Harm

0

For reporting purposes, the number has been rounded up to the nearest whole number.
Predicted Lives Spared Harm =

0