Key Nursing Quality Improvement Initiatives from the Heart Institute’s Critical Event Review (CER)

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Background

One of Children's National Heart Institute's most successful and innovative continuous quality improvement measures is the weekly Critical Event Review (CER). Whereas, historically, Morbidity & Mortality conferences were physician only, this multidisciplinary collaborative meeting is a discussion of safety events designed to foster a safe system and high quality of care for our patients. Cardiac critical care, acute care and clinic nurses, physicians, respiratory therapists, surgeons, social workers and pharmacists are some of the many disciplines represented at CER, all with the focused goal of participating in a blame-free environment to learn from recent events.

Nursing Involvement in the Process

• Identify opportunities for improving safe delivery of care at the bedside and at the systems level
• Classify events into defined common cause categories (Figure 1)
• Lead the development and implementation of action plans
• Present follow-up work at CER to close the communication loop

Mandatory discussion topics:
• CPR
• Rapid deployment of ECMO
• Unplanned transfer to ICU < 24 hours
• Mortalities
• Safety events that implicate systems or management issues

Examples of Action Items from Common Cause Categories

Technical : Order Entry/EMR

Tetralogy of Fallot (TOF) "Tet Spells" on the Heart and Kidney Acute Care Unit (HKU)

Identified Issue: Hypercyanotic episodes associated with TOF (often referred to as “Tet spells”) require rapid recognition and intervention to break the cycle of cyanosis & acidosis. Barriers to rapid intervention identified in CER included:

• Administration of morphine & normal saline bolus (ordering, dispensing & administration)
• Access to Non-Rebreather (NRB) masks

An order set was created and built into the electronic medical record (EMR) to be used for all unpaired TOF patients admitted to HKU.

• Includes PRN orders for morphine and boluses, increasing timeliness for administration
• NRB masks now set up at bedside for these patients

Since implementation of order set, no delays of care for “Tet spells” have been identified

Monitoring/Treatment Delayed

Eliminating delays in Holter readings in the Ambulatory Cardiology Clinic

Identified Issue: Delay in Holter monitor processing and management resulted in delay of treatment. It was identified that there were no defined processes or accountability that provided integration among the multidisciplinary team involved in the Holter process.

• Work around processes were being used to meet individual provider needs
• Clinic nurses utilized the Children's Hospital Association (CHA) listserv to determine best practices and benchmarks for staffing and turn around times
• Clinic nurses led a multidisciplinary task force to define accountability for each part of the process
• Nurses developed a policy and procedure integrating process, priority for reading and accountability
• Education was rolled out to nurses, technologists and providers regarding the new process, policy and goal of the changes

On-going audit of turn-around times to monitor sustained improvement (Figure 2)

Communication: Hand-Off/Bedside Providers

Collaboration between Cardiac Intensive Care (CICU) and HKU Acute Care Nursing

Identified Issue: Incomplete hand-off of information was the cause of multiple events discussed at CER.

Bedside nurses from CICU and HKU collaborated to discuss ways to improve and standardize the hand-off process.

The following process changes were successfully implemented:

• Nurses from the HKU go to the CICU and receive hand-off from the CICU nurse in person.
• Nurses complete a checklist to confirm that all necessary information is conveyed and that all necessary tasks are completed. (Figure 3)
• HKU nurses perform brief head to toe exams of the patients.
• HKU nurses introduce themselves to the families and/or patients prior to transfer and provide an overview of what to expect on the HKU Unit.

Conclusions

• Involving all disciplines in the review of events promotes mutual understanding and respect in a safe learning environment. Additionally, it utilizes the perspective of each discipline in the quest to find solutions and improve the safe delivery of care. By empowering all disciplines to contribute, this process removes organizational barriers that may hinder outcomes.

• A collaborative learning culture not only allows, but encourages staff to redefine processes and gain a deeper understanding of what can work better.

• The discussion of the events as a multidisciplinary group allows individuals to debrief and learn the perspectives of other clinicians involved in the events. This can be cleansing, liberating, and healing for the clinicians.

References


Figures 1-3: Children's National Health System, Critical Event Review (CER)"