



## **CHOC Children's Hospital** *Best Evidence and Recommendations*

### **Implementation of a Trauma Code Nurse Role in the PICU**

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**PICO:** In the pediatric intensive care unit setting, does a trauma code nurse (TCN) role improve patient safety outcomes, increase nurse satisfaction, increase patient and family satisfaction, and maintain a net neutral impact on unit staffing budget?

**P (Population/problem):** In the pediatric intensive care unit (PICU)

**I (Intervention/Issue):** does a trauma code nurse role

**C (Comparison):** compared to staffing with no trauma code nurse

**O (Outcome):** improve patient safety outcomes, increase nurse satisfaction, increase patient and family satisfaction, and maintain a net neutral impact on unit staffing budget?

#### **Background:**

Ensuring adequate nursing staffing in the critical care unit is essential to the delivery of safe patient care; it also supports the safety, satisfaction and retention of competent staff. Nurse-to-patient ratios in a pediatric intensive care unit (PICU) are typically 1:1 or 2:1 based on patient acuity. This ratio ensures that the nurse is available to monitor and manage changes in the child's status, provide necessary treatment interventions and give supportive care for the patient and family members. In addition, in a fast paced, high acuity ICU, managing procedures, transports and high patient turnover rates can be challenging. As an organization on-boards new and inexperienced staff, this can increase the need for staffing support. Many facilities have implemented staffing innovations, such as a resource nurse role/TCN, in order to provide an extra set of experienced hands to assist with procedures and skills in the unit (Tazbir, 2014). The PICU at CHOC Children's implemented a 12-hour helper role to assist with safe staffing during the most recent winter months. Unfortunately, without a formalized job description and clearly defined roles and responsibilities, this 12-hour helper often gets pulled into covering nurse breaks and staffing for new patients. The lack of structure around this role has threatened its intent and makes it challenging to assess the success of this innovation in staffing.

The purpose of this evidence-based project was to find the best available evidence to support the adoption of a defined TCN role and to establish appropriate outcome measures to evaluate its effectiveness.

#### **Search Strategies and Databases Reviewed:**

- Databases searched for this review included CINAHL, Cochrane, Pub Med, in order to identify staffing model interventions to improve patient safety and nursing satisfaction. Website review included AACN and American Journal Nursing. The keywords from the PICO question included in the search process were nursing staff, ICU staffing, patient outcomes, patient safety, nursing resource, nursing unit productivity, and nurse burnout. The search was limited to the English language. A total of 30 articles were reviewed, 17 included in our literature review related to nurse staffing, patient mortality and outcomes, as well as, nurse satisfaction and hospital



outcomes. The other 13 articles were involving an extra bedside nurse on the unit, in patient care and not as a resource.

### **Synthesis of the Evidence:**

- Although staffing can be complex, ensuring an effective staffing plan can positively affect the measurable outcomes on the unit.
- Each additional nurse added to the nurse-to-patient ratio mix was associated with decreased burnout and increased satisfaction (Aiken, 2002; Lang, 2004).
- Adding one extra nurse in the nurse-to-patient ratio, shows evidence of decreased patient mortality, failure to rescue, and decreased adverse events (Aiken, 2002; Cho, 2008; Lang, 2004; Lee, 2017; West, 2014)
- Higher numbers of nurses are associated with improved survival rates among critical care patients (Duffin, 2014).
- There is a significant relationship between nurse staffing and medication errors and falls (Frith, Anderson, Tseng et al., 2012)
- Articles that are related to resource nurse models are largely descriptive, general in nature.
- The literature on resources nurses is limited and describes the personnel as direct care, unit-based staff nurses (Quinn-O'Neal, 2011)
- Staffing innovations such as the use of resource nurses have been used to provide additional support for nurses in many settings.
- How these positions are defined, staffed, funded, and used differs from institution to institution and even within institutions (Tazbir, 2014).
- One study found the implementation of a resource role to be an effective way to address rapid changes in acuity and to support staff nurses in the ICU by providing “hands when you want them, staffing when you need it” while maintaining staffing budgets (Tazbir, 2014).
- The resource nurse leader role provides a much needed change in the ability to provide support for the staff and ever-changing patient acuity while allowing for the unit budget to remain unchanged (Tazbir, 2014).
- No articles were found specifically related to implementing an RNL role in Pediatric Intensive Care Units.
- No qualitative data exists based off of defined resource nurse role in pediatric hospital setting.

### **Practice Recommendations:**

As health care becomes increasingly complex, staffing innovations are necessary to ensure the provision of safe patient care. Based on our review of the literature, we recommend the development and implementation of a formal trauma code nurse role as an adjunct to existing staffing to ensure the delivery of safe patient care.

- Create a “trauma code nurse” job description, roles and responsibilities as well as identify the qualifications and credentials to select eligible candidates.
- Encourage staff to nominate nurses for consideration of the role.
- Budget for a trauma code nurse in the PICU each shift.
- Develop a “trauma code nurse” binder with: references to policies and new education, coaching strategies, near misses/teaching moments and shift checklist of responsibilities.
- Launch the formalized TCN role. Educate staff during staff meetings and on the unit.
- Use staffing tools to empower the charge nurses to make decisions about staffing and adjust them accordingly based on the acuity of the unit.
- Measure outcomes through the formal staff engagement and safety surveys, to assess nurse



satisfaction with new role.

- Identify specific questions in the (HCAHPS) survey to evaluate family satisfaction with nursing care and customer service; and monitor the impact on nurse sensitive indicators (hospital acquired conditions such as catheter associated bloodstream infections, pressure injuries, and unplanned extubations).

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