Exemplary Professional Practice: Patient Care Delivery Model(s)

EP13EO Nurses participate in interprofessional groups that implement and evaluate coordinated patient education activities.

EP13EO: Provide one example, with supporting evidence, of an interprofessional patient education activity that was associated with an improved patient outcome. Supporting evidence must be submitted in the form of a graph with a data table that clearly displays the data.

Background/Problems(s)

The burgeoning biotechnological, pharmacological and knowledge advances of the past 30 to 40 years have saved or improved the lives of many children who previously might not have survived with existing medical interventions. Health system factors, along with the desire to support the family unit, have led to increasing numbers of these children to be cared for at home, often by their parents or guardians. This shift poses a challenge for nurses who are accountable for discharge planning activities including teaching families how to care for their children at home.

Tracheostomy placement in pediatric patients is a relatively rare event. All pediatric tracheostomy placement procedures for Massachusetts General Hospital (MGH) patients are performed in the specialty operating rooms at the Massachusetts Eye and Ear Infirmary (MEEI), an adjoining specialty hospital, because Pediatric ENT Surgeons prefer using these facilities. All pediatric patients who receive new tracheostomies are then transferred to MGH for immediate postoperative care in the Pediatric Intensive Care Unit (Bigelow 6) or Neonatal Intensive Care Unit (Blake 10). This institutional arrangement has increased the need for care coordination because each institution has its own unique staff, policies, and procedures. In addition, the patient/family education and teaching methods vary between the two institutions and even from unit-to-unit and clinician-to-clinician within the same institution. These differences create challenges for clinical nurses and family members as they try to provide day-to-day care and plan for discharge. The lack of a standard approach for teaching family members how to care for their child with a tracheostomy also created stress for family members as they try to understand the care trajectory and plan for discharge. At MGH, this patient population has historically had greater postoperative average lengths of stay (LOS) than benchmark institutions participating in the Global Tracheostomy Collaborative, a pediatric tracheostomy registry based at Boston Children’s Hospital. As an example, the postoperative average LOS for non-ventilated pediatric tracheostomy patients at Children’s National Medical Center, Washington, DC, a recognized leader in the care of this patient population, is only 10 days. This lower LOS was achieved through standardization of patient/family teaching and other improvements in preparing for discharge.

Goal Statement(s)

The goal of this interprofessional patient/family education activity was to decrease the postoperative average LOS for pediatric patients with a tracheostomy as measured by
the number of days between the date of the procedure and the date of discharge by standardizing the patient/family teaching process.

**Description of the Intervention(s)/Initiative(s)/Activity(ies)**

At MGH, clinical nurses are responsible for assessing the patient's/family's readiness to learn the necessary skills and assisting families to acquire the skills needed to provide complex care in the home. Kevin Mary Callans, RN, BSN, Clinical Nurse and Case Manager, assists with care coordination and discharge planning for pediatric patients who have had tracheostomies across both MEEI and MGH. She has regular contact with the family members of children with tracheostomies and has attempted to help smooth the transition in care between the two institutions by coordinating activities in the hospital as well as setting up services for home care post-discharge. In her role, she has observed the two institutional approaches to patient/family education practices and the plans for discharge and transition to home. She noticed that many family members expressed concerns that there were gaps in communication with clinicians, confusion about teaching materials and techniques, and the difficulty in seamlessly transitioning to the home environment. Family members also frequently expressed a desire to "go home" to care for their child. She also noted that many nurses felt uncomfortable caring for patients with tracheostomies and that they also approached teaching in a variety of ways and began teaching at different timeframes during the hospitalization. This lack of a standardized approach to patient/family teaching contributed to a longer postoperative average LOS at MGH of 17 days for the quarter July-September 2013.

**Team Formation**

Based on her assessment of current practice, Callans identified four areas in need of improvement for the care of this population:
- Patient/family education materials and processes
- Care coordination processes
- Family support mechanisms
- Staff education regarding care of the patient with a tracheostomy

In early October 2013, Callans reached out to unit-based nursing leadership, clinical nurses and respiratory therapists at MEEI and the pediatric units at MGH: Pediatrics Unit (Ellison 17), Pediatrics Unit (Ellison 18), Pediatric Intensive Care Unit (Bigelow 6), and Neonatal Intensive Care Unit (Blake 10) to discuss ways to begin to improve care processes. In addition, she engaged Christopher Hartnick, MD, the surgeon who performed the majority of pediatric tracheostomy procedures and he expressed his support for moving forward with care redesign. Four clinical nurses, Janet Actis, MSN, RN, PNP-BC, Pediatric Unit (Ellison 17), Carolyn Bleiler, MSN, RN, Neonatal Intensive Care Unit (Blake 10), Jen Cataldo, BSN, RN, Pediatric Intensive Care Unit (Bigelow 6) and Nicole Tavaras, BSN, RN, Pediatric Intensive Care Unit (Bigelow 6) also agreed to participate in the redesign.
Over the course of October to December 2013, the interdisciplinary team agreed upon and developed a standardized approach to patient/family discharge education which included:

- new educational materials
- new care coordination activities
- revised/new support mechanisms for family members in the hospital and post-discharge

All disciplines involved in teaching family members (i.e., nurses, surgeons, respiratory therapists) agreed to follow the new approach moving forward.

**Patient/Family Education Improvements**

A critical, education-related decision was made to begin discharge teaching on postoperative day 1 as recommended by the consensus statement on pediatrics from the American Academy of Otolaryngology Standards on Pediatric Tracheostomy Care. Materials were produced to support the teaching process including:

- Three Vidscripts (short videos that can be watched on any computer or mobile device including after discharge)
  - Actis demonstrating tracheostomy care on a doll in English
  - Actis demonstrating tracheostomy care on a doll in concert with a Spanish interpreter
  - Hartnick demonstrating a tracheostomy change on a patient with family members
- The adoption of “Trach Me Home,” an interactive game that emphasizes the fluidity of the discharge planning process developed by Children’s National Medical Center, Washington, DC.
- A discharge patient/family education slideshow
- A discharge patient/family education checklist to record teaching activities

**Care Coordination Improvements**

Callans had identified that families often had difficulties transitioning to home because they did not know what to expect post-discharge. She also had heard many family members of previous patients complain that there was a gap between discharge and the start of home care services and they didn’t have needed supplies to provide care. In an effort to address family members’ concerns about this transition, new care coordination activities were implemented including:

- MEEI Ear Nose and Throat Clinic clinical nurse meets parents prior to discharge to establish a relationship with staff who will be involved in the child’s care on an outpatient basis
- Initial supplies needed for providing care at home are provided to bridge the time gap between discharge and first home care or equipment vendor visit.
- A pre-printed equipment prescription that is faxed to the vendors prior to discharge.
Support Mechanism Improvements

In addition, a parent lunch group held every other month was restructured to focus on topics related to ongoing learning needs and support needed at home rather than the more informal structure that had been in place. A parent-to-parent mentoring program with the parent dyads established shortly after surgery was also put into place.

Staff Education

Interprofessional team members (i.e., physicians, respiratory therapists, nurses) were informed of the upcoming launch of the new approach to education. More formal staff education was conducted over the course of January – March 2014. Education for the clinical nurses included reviewing all tracheostomy care activities as well as the new approaches to education and care coordination. Actis, Bleiler, Cataldo, and Tavares agreed to serve as “Super Users” who would assist their colleagues with implementing the new approach to teaching and provide any additional needed support regarding tracheostomy clinical care. The new standardized approach to patient/family education and care coordination was implemented at the beginning of April 2014.

Participants: Interprofessional Pediatric Tracheostomy Patient/Family Education Improvement Team

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<tr>
<th>Name/Credential</th>
<th>Title</th>
<th>Department/Unit</th>
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<tbody>
<tr>
<td>Kevin Mary Callans, RN, BSN</td>
<td>Clinical Nurse/Case Manager</td>
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<td>Janet Actis, RN, MSN, PNP-BC</td>
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<td>Diane Carroll, RN, PhD</td>
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<td>Clinical Nurse</td>
<td>Pediatric ICU (Bigelow 6)</td>
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Outcomes

The post-operative average LOS for pediatric patients with tracheostomies using the existing approach to patient/family education was 17.0 days in the quarter July to September 2013. Subsequent to the adoption of the new, standardized, interprofessional approach to patient/family education, the post-operative average LOS for this patient population decreased in five out of six quarters in the post-intervention period spanning April 2014 to September 2015.

The development and implementation of a new, interprofessional approach to patient/family education and care coordination successfully improved a desired patient outcome. Beginning teaching on day 1 post-surgery, standardized materials and the approach to teaching engaged family members earlier in the patient’s LOS. This along, with new care coordination activities, helped to support family members and prepare them for an earlier discharge. Callans was instrumental in identifying many issues with existing processes, including the family members’ desire to “go home” sooner. By working with her colleagues to redesign the discharge process, this goal was successfully met.