STRONG CHILDREN'S RESEARCH CENTER
Summer Research Scholar

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ABSTRACT

Title: ***Reducing Emergency Department Utilization in Pediatric Patients Following Gastrostomy Tube Insertion: A Quality Improvement Project***

Background: A pediatric gastrostomy tube (G-tube) is a surgically placed device that allows for long term enteral access in children who are unable to obtain proper nutrition orally.[1] Despite being a routine procedure, there is a lack of standard guidelines for inpatient and post-discharge care of G-tube patients. As a result, G-tube placement can be associated with high complication rates.[2] Complications include bleeding, leakage, balloon rupture, excessive granulation tissue, tract disruption, and, most commonly, dislodgement.[3] Though many complications are minor in nature and can be resolved at home by a patient's caregiver, they are often unprepared to do so and present to the emergency department (ED) for care.[4]

Recent quality improvement (QI) efforts have successfully decreased the burden of G-tube complications on the healthcare system through standardization of care, caregiver education, and social support.[5] In 2018, the University of Rochester implemented a "care bundle" consisting of a preoperative checklist, an intraoperative training video, a postoperative feeding plan, and consistent family education; the care bundle successfully reduced the amount of early (<90 days) dislodgements by 47%.[6] In 2022, a caregiver support network was created to assist families of a child within the first three months of G tube insertion.

Objective: The purpose of this study is to characterize trends in ED utilization by pediatric patients who had a G-tube placed at the Golisano Children's Hospital between 2012 and 2022.

Results: 397 patients were identified. ED visits and dislodgements were tracked prospectively starting in 2018. Specifics about complications and related hospital system utilization were gathered retrospectively. The mean number of G-tube related ED visits per new G-tube placed was 1.5 prior to the 2018 intervention but decreased following the intervention, which established a new mean of 0.7 (Figure 1). The percent of G-tube patients who visited the ED at least twice, or high ED utilizers, also declined during this time (Figure 2a). High ED utilizer trends did not vary significantly between hospital units (Figure 2b).

Figure 1.

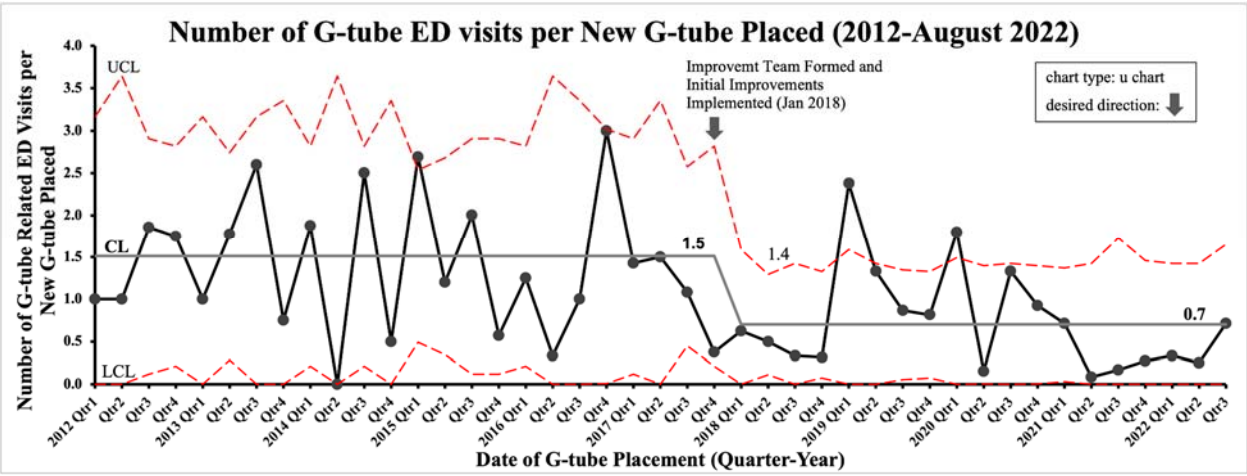


Figure 2a.

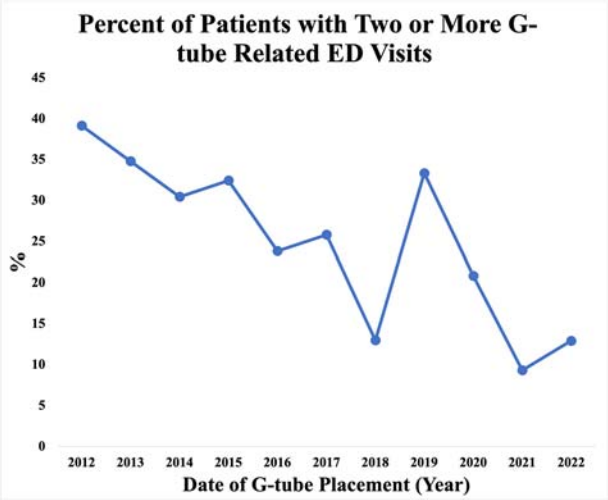
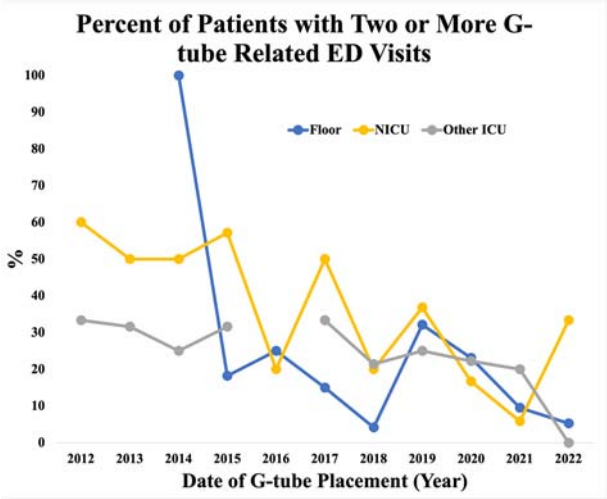


Figure 2b.



Conclusion: Following a quality improvement effort to standardize care after G-tube insertion, there was a decrease in G-tube related ED utilization, underscoring improvements in caretaker competency and the quality of care provided at Golisano Children's Hospital. Moving forward, we hope that our caregiver support network (G-tube buddy program) will further improve outcomes of G-tube patients and reduce strain on the ED and the healthcare system as a whole.

References:

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