

**University of Rochester Department of Pediatrics  
Pediatric Fellowship Programs  
Quality Improvement Project**

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**Project Title:** Pre-procedural video intervention: Leads to reduced anxiety level in children prior to first endoscopic procedure in the Pediatric GI Suite at Golisano Children's Hospital

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**Back ground:**

It's not uncommon for both children and adults to experience anxiety prior to any invasive procedure such as surgery or endoscopy, due to the fear of pain and/or potential complications associated with the procedure. However, unlike most adults, children are often unable to verbally express their fears. Unfortunately, the inability to verbally express fears can activate a cascade of events leading to poor outcomes for children after the invasive procedure. These outcomes may include increased post-procedure pain, sleep disturbances, school absence and maladaptive behavior<sup>1</sup>. One of the common reasons that may contribute to increased anxiety level in children is lack of pre-procedure education. Generally, pre-procedural education is focused around parents and children are not routinely asked about how they feel about the impending procedure<sup>2</sup>. The best way to reduce anxiety in children is to educate them prior to the procedure regarding various aspects such as what to expect before, during and after the procedure<sup>3</sup>. Evidence supports that even the simplest pre-procedure education in the form of a social story, video, or reading material has a significant impact in reducing their anxiety and fear. We aimed to reduce the anxiety level in children prior to their first endoscopic procedure in our Pediatric GI Endoscopy Suite.

**Project Aim:**

The purpose of this quality improvement project was to reduce pre-procedural anxiety level by 5% over next six months, in children who were undergoing their first endoscopic procedure in the Pediatric GI Endoscopy Suite at Golisano Children's Hospital.

## Methods:

Baseline data collection: (From December 10, 2019 to January 20, 2020)

In the pre-anesthesia area, all children above 10 years of age who came in for their first endoscopic procedure were given an anxiety questionnaire to grade their anxiety level on a scale of 0 to 3, with 0 (no anxiety) and 3(severe anxiety).

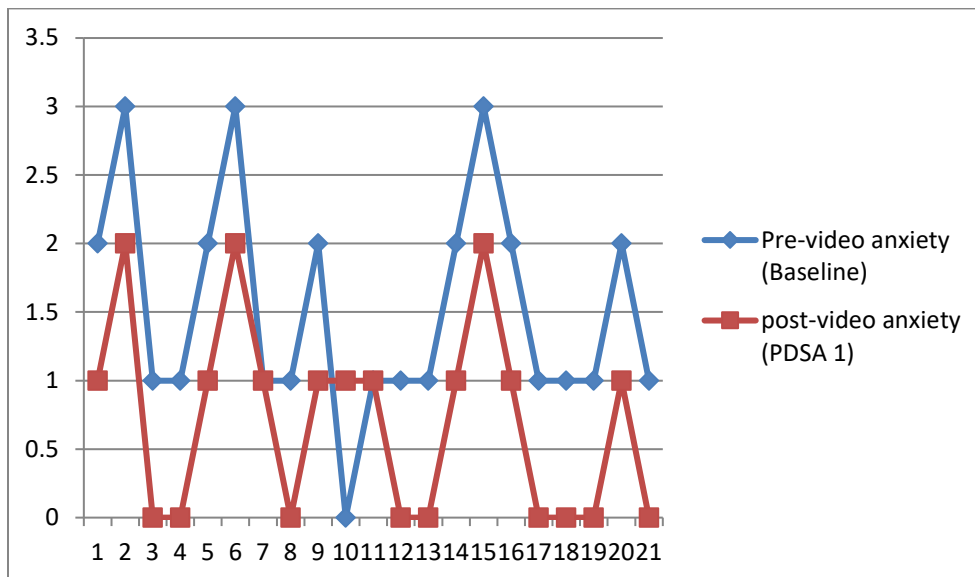
PDSA Cycle 1: (From January 22, 2020 to March 16, 2020)

In the pre-anesthesia area, all children above 10 years of age who came in for their first endoscopic procedure were shown a short video describing detail of the endoscopic procedure in non-medical language. This video addressed what the children would experience before, during and after the endoscopic procedure(s). Following this, all children were given a post-video questionnaire to grade their anxiety level from 0 to 3, with 0 (no anxiety) and 3 (severe anxiety).

It was not possible to carry out further PDSA cycles due to COVID-19 pandemic crisis.

## Results:

Pre and post-video average anxiety levels were compared after the PDSA cycle 1. Data demonstrated that at baseline, the average anxiety level was 1.52, which decreased to 0.71 in PDSA cycle 1. It was found that there was 46% reduction in anxiety level in children after watching the educational endoscopy video.



Graph: Comparison of pre and post-video anxiety level

**Discussion:**

The endoscopy video intervention was successful in significantly decreasing children's pre-procedure anxiety level by 46%. The video is a feasible addition to patient care, without increased time or workload for the nursing staff given its short duration and easy accessibility. Overall, reduction in pediatric pre-procedure anxiety, leads to faster post anesthesia recovery, short PACU stay and overall better outcomes. It also helps to reduce parental anxiety level and improves satisfaction. The endoscopy video intervention will be implemented as part of the standard pre-procedure education protocol at Pediatric Gastroenterology Endoscopy Suite at Golisano Children's Hospital.

**References:**

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2. Copanitsanou, P. & Valkeapaa, K. (2013). *Effects of education of pediatric patients undergoing elective surgical procedures on their anxiety –a systematic review. Journal of Clinical Nursing, 23, 940-954.*
3. Matziou, V., Chrysostomou, A., Perdikaris, E.V.P. (2013). *Parental presence and distraction during painful childhood procedures. British Journal of Nursing, 22(8), 470-475.*
4. Fernandez, S.C., Arriaga, P. & Esteves, F. (2014). *Providing preoperative information for children undergoing surgery: a randomized study testing different types of educational material to reduce children's preoperative worries. Oxford Journals, 29(6), 1058-1076.*