The development of a rectal dilation multimodal educational tool-kit for anorectal malformation patients with a perineal fistula.

**Background:** One complex, but rare NICU diagnosis is anorectal malformations (ARM). Imperforate anus (IA) with a perineal fistula is a subset seen most often with this condition. A perineal fistula is a congenital abnormal anal opening outside of the sphincter muscle; therefore making it difficult for stool to leave the body. Surgery is often required, but rectal dilations are often necessary before and after surgical repair. After a 24 hour observation period (once a fistula is noted), rectal dilations are often initiated to allow the passage of stool. A Hegar dilator is used to keep the anus open and helps prevent the child’s anus from narrowing over the course of approximately 3 months. Over the past 3 years, the Riley pediatric general surgery department created an ARM registry to track surgical repair and rectal dilations. 15 of the 36 registered patients had a perineal fistula, thus further rectal dilation educational opportunities were generated for families and care providers. In order to facilitate this education, a multimodal tool-kit was created.

**Objectives:**
1. Provide rectal dilation information to parents and care providers to assist with adherence to the therapeutic regimen.
2. Provide anticipatory guidance to parents and care providers, related to pre- and post-surgical expectations, to decrease anxiety caused by lack of knowledge on anorectal malformations with a perineal fistula.
3. IA patients with a perineal fistula will have an expedited, safe, and informed hospital discharge, supported by comprehension of verbal and hands-on education in order to prevent complications, re-admissions, and improve overall outcomes.

**Question:** How is your institution utilizing tool-kits to enhance procedural education of complex diagnoses prior to hospital discharge?

**Design:** NICU advanced providers requested in-depth dilation training in order to facilitate training of novice nurses and parents. A pilot group of 210 NICU nurses were evaluated on their knowledge of IA with a perineal fistula, as well as rectal dilations via pre and post testing.

**Clinical Implications:** ARM and dilation information was displayed at the Riley NICU annual education convention. Furthermore, a parent and care provider check list was then created to aid in comprehension of learning of the dilations and included: A rectal dilation education handout, identification of signs and symptoms of intolerance and verbalization of when/how often to repeat the rectal dilation, identification of supplies needed and set up for home, return demonstration proficiency, verbalization of when to call the surgeon, and demonstration of how to clean the rectal dilator were included. Additionally, multiple presentations were provided to the general surgery floor nurses. All educational documents were made available on the hospitals’ internal website.

**Future Development:** Areas include videography for electronic learning modules and future presentations involving other hospital units and disciplines in addition to the pilot group.

Lauren Bates, MSN, RN, CPNP-PC, Pediatric General Surgery, Riley Hospital for Children at Indiana University Health, Indianapolis, Indiana; Stefanie Dunn, MSN, RN, CPNP-PC, Pediatric General Surgery, Riley Hospital for Children at Indiana University Health, Indianapolis, Indiana.
Clinical Issue/Background
Riley Hospital for Children at Indiana University Health is Indiana’s largest and most skilled pediatric system in the state. In addition to having the states only pediatric research hospital, Riley hosts a level IV, 60 bed, neonatal intensive care unit (NICU), with some of the most intricate and acute babies requiring multispecialty care. It is recognized by the U.S. News & World Report as one of the best children’s hospitals and departments in the nation.

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Objective
Over the past 3 years, the Riley pediatric general surgery department created an ARM registry to track surgical repair and rectal dilations. 15 of the 36 registered patients had a perineal fistula, thus further rectal dilation educational opportunities were generated for families and care providers. In order to facilitate this education, a multimodal tool-kit was created. Objectives included:

1. Provide rectal dilation information to parents and care providers to assist with adherence to the therapeutic regimen.
2. Provide anticipatory guidance to parents and care providers, related to pre- and post-surgical expectations, to decrease anxiety caused by lack of knowledge on anorectal malformations with a perineal fistula.
3. IA patients with a perineal fistula will have an expedited, safe, and informed hospital discharge, supported by comprehension of verbal and hands-on education in order to prevent complications, re-admissions, and improve overall outcomes.

Toolkit
ARM and dilation information was displayed at the Riley NICU annual education convention. Furthermore, a parent and care provider check list was then created to aid in comprehension of learning of the dilations and included:

- Ileostomy: An ileostomy is a temporary procedure performed at the time of surgery, allowing the feces to exit the body through the abdomen. This helps prevent complications and improve overall outcomes.
- Perineal Fistula: A perineal fistula is an abnormal opening in the perineum, allowing for the passage of stool. Dilations are used to keep this opening open and prevent narrowing.
- Rectal Dilation: Rectal dilations are performed to help maintain the opening of the perineal fistula and prevent complications.

Innovative Practice Change
The toolkit was well received amongst the NICU nursing staff members, as well as parents learning dilations for the first time. Pre and post testing indicated comprehension of the most important information related to performing rectal dilations. Tangible supporting documents helped improve a void in education, thus improving confidence, decreasing anxiety, and improving the overall skill set of care providers.

Areas of Future Development
Areas of future development include using linear learning to implement video technology into electronic learning modules for hospital wide computer based training. Future presentations will involve other hospital units and disciplines in addition to the pilot group.

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References
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