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### Evaluation of a Hirschsprung Disease Systemwide Enterocolitis De-escalation Strategy

Albert Aickareth

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## Evaluation of a Hirschsprung Disease Systemwide Enterocolitis De-escalation Strategy

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**Primary Mentor (one name only):** Rebecca Rentea, MD

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**IRB Number (if applicable):** STUDY00000717

**Describe role of Submitting/Presenting Trainee in this project (limit 150 words):**

Reviewed literature, assisted in analysis.

**Problem Statement/Question, Background/Project Intent (Aim Statement), Methods (include PDSA cycles), Results, Conclusions limited to 500 words**

**Problem Statement/Question:**

Components of systems that identify, treat and prevent enterocolitis are not well described. In addition, for patients with HSCR both pre and post pull-through, questions regarding a child's clinical status occur through several different medical access points and may occur outside of colorectal center clinic hours.

**Background/Project Intent (Aim Statement):**

Hirschsprung associated enterocolitis (HAEC) is a severe and potentially life-threatening complication of Hirschsprung Disease (HSCR) that can present with a variety of symptoms from mild abdominal pain to fulminant colitis. We evaluated our system-wide enterocolitis de-escalation

strategy for both hospital staff and patient caregivers. Our primary analysis was to compare ED and hospital admissions as well as resource utilization in patients treated before and after the systemwide strategies were implemented.

**Methods (include PDSA cycles):**

We identified that HAEC was a significant problem for HSCR, and patients' families were having issues within the hospital process through clinic calls/messages/feedback. We planned and executed a standardization of both patient/family facing and staff facing protocols for HSCR patients. Based on the results from this study, we can adapt/plan for further improvements.

Our study was a single institution retrospective review consisting of all HSCR patients from 2015 to 2017 (pre-support system, Group A) and 2019 to 2021 (post-support system, Group B).

A comparison between pre/post groups was performed for number of hospital admissions, length of stay, emergency department visits, clinic visits, call center messages, clinic phone calls and electronic messages. Additional demographic and clinical information were evaluated.

**Results:**

A total of 36 patients were evaluated. Group B showed a statistically significant decrease in length of stay for hospital admission and increased resource utilization when compared to Group A. Emergency Department admission rates remained the same among both groups.

**Conclusions:**

Implementation of a HAEC support system demonstrated that post implementation, there was an increased patient utilization of the resources promoted by the system while decreasing the length of stay. Continued education of caregivers and the treatment team is anticipated to result in a greater effect; thus, we feel that the implementation of such protocols in institutions is beneficial.