# Barriers and Facilitators to Patient Identification in Pediatric Enhanced Recovery Protocols

### Maxwell J. Wilberding<sup>1</sup>, Willemijn L.A. Schäfer<sup>1,2</sup>, Audra J. Reiter<sup>1,6</sup>, Gwyneth A. Sullivan<sup>1</sup>, Andrew Hu<sup>1</sup>, Jane L. Holl<sup>3</sup>, Salva N. Balbale<sup>2</sup>, Sarah C. Blake<sup>4</sup>, Sharron Close<sup>4</sup>, Teaniese L. Davis<sup>5</sup>, Julie K. Johnson<sup>1,2</sup>, Mehul V. Raval<sup>1,2,6</sup>

<sup>1</sup> Surgical Outcomes and Quality Improvement Center, Department of Surgery, Northwestern University Feinberg School of Medicine, Chicago, IL; <sup>3</sup> Department of Neurology, Biological Sciences Division and Center for Healthcare Delivery Science and Innovation, University of Chicago; <sup>4</sup> Department of Health Policy and Management, Rollins School of Public Health, Emory University, Atlanta, GA; <sup>5</sup> Center for Research and Evaluation, Kaiser Permanente Georgia, Atlanta, GA; <sup>5</sup> Center for Research and Evaluation, Kaiser Permanente of Surgery, Department of Surgery, Department of Surgery, Northwestern University Feinberg School of Medicine, Ann & Robert H. Lurie Children's Hospital of Chicago, Chicago, IL

### Background

- Enhanced Recovery Protocols (ERPs) for Gastrointestinal (GI) surgery) are associated with decreased length of stay, complications, and readmissions<sup>1,2</sup>
- Use of ERPs is limited in pediatric surgery; a significant barrier being the identification of eligible patients $^{2,3}$
- This study leverages ongoing research from the ENhanced Recovery In CHildren Undergoing Surgery (ENRICH-US) study

#### Aim: to assess barriers and facilitators to identifying patients eligible for a pediatric surgery ERPs.

### Methods

- Semi-structured interviews with Implementation Teams (all types of clinicians and staff involved in pediatric surgery) at 6 ENRICH-US pediatric surgery centers
- Researchers conducted two online interviews per site at 6-months and 12-months after starting study recruitment
- We used the Practical, Robust Implementation and Sustainability Model (PRISM) framework to deductively code in teams of two or three to reach consensus
- Codes used for analyses: "eligible patients" as well as barriers, facilitators, and other pertinent perspectives regarding identifying patients eligible for pediatric surgery ERP<sup>4,5</sup>



#### **M Northwestern** Medicine<sup>®</sup> Feinberg School of Medicine



It's	no
get	tin
eve	ery
the	n, s





Figure 1 (above) shows a sample of quotes representing barriers and facilitators to pediatric patient identification as provided by surgeons, childlife specialists, nurses, and study coordinators across hospitals interviewed in the study. Quote boxes colored green indicate a facilitator to patient identification, red as a barrier. Quotes are further broken down into categories of the individual initiative of providers, teamwork and education, and IT structure.

Table 2 (below) shows an interesting quote regarding patient identification and individual initiative.

#### Table 1

[Interviewer 1]: Is there anything we can do to better support you? It sounds like you have a good system and you're mostly like the funnel, you're the main person that funnels your recruitment in, so that's a real advantage to you. But is there anything that we can do to help support you in the recruitment? [SurgChamp\_hosp5]:

You can get me more IBD patients.

### Results

- There were 12 total interviews that included seven pediatric surgeons, four child life specialists/patient advocates, four nurses, and five research study coordinators (20 respondents in total)
- Successful identification of eligible patients occurred when a clinician proactively screened the Operating Room (OR) schedule or when a designated coordinator was utilized
- Identification of eligible patients was hindered by staff turnover or absence of the designated clinician
- Teams that held regularly scheduled meetings and assured broad education of clinicians about eligibility criteria were more successful
- One center developed an identification algorithm leveraging IT,
  - whereas other sites struggled to involve IT as a facilitator
- There was little to no evidence of the encouraged exchange of identification practices between sites involved in the study

### Conclusions

- Identification of pediatric surgical patients eligible for an ERP can be facilitated by:
- Designating multiple team members to proactively review the OR schedule
- Educating all clinicians about the eligibility criteria
- Enhancing coordination across the surgical team
- Engaging in IT solutions such as semi-automated algorithms
- The facilitated sharing of solutions and strategies across centers can
  - potentially accelerate implementation
- Next Steps

5.

- Incorporation of more interviews, centers
- Synthesizing a guidance protocol for future pediatric surgery identification

## References

- Miller TE, Thacker JK, White WD, et al. Reduced length of hospital stay in colorectal surgery after implementation of an enhanced recovery protocol. Anesth Analgesia. 2014;118(5):1052-1061.
- Short HL, Heiss KF, Burch K, et al. Implementation of an enhanced recovery protocol in pediatric colorectal surgery. J Pediatr Surg. 2018;53(4):688–692.
- Purcell LN, Marulanda K, Egberg M, et al. An enhanced recovery after surgery pathway in pediatric colorectal surgery improves patient outcomes. J Pediatr Surg. 2021;56(1):115–120.
- MAXQDA 2020. Version 2020. VERBI Software; 2019.
- Lofland J, Lofland LH. Analyzing social settings: A Guide to Qualitative Observation and Analysis, 3rd Edition. Wadsworth Publishing Company; 1971.