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# Using NSQIP-Pediatrics to Target Quality Improvement Initiatives for Appendicitis

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## Introduction & Objectives

- Appendectomies are the leading, emergency abdominal surgery performed on pediatric patients within the USA
  - Conventionally, appendectomies result in standard next day discharge (NDD) after overnight observation<sup>1</sup>
  - In recent times, same day discharge (SDD) is recognized as the new normal upon completion of this procedure within adults
  - The quantity of opioid painkillers prescribed by pediatric surgeons postoperatively varies considerably<sup>2</sup>

### Objectives:

- Evaluate the effect of SDD versus NDD in combination with opioid prescription for the pediatric patient-- post-acute appendectomy

## Methods

A retrospective chart review was performed using the American College of Surgeons (ACS) National Surgical Quality Improvement Program– Pediatrics (NSQIP-P) database and EPIC.

### Inclusion Criteria:

- Data from Jan. 1, 2015-June 1, 2020
- Patient under 18 years old
- Patient underwent a laparoscopic appendectomy procedure for acute, uncomplicated illness

### Exclusion Criteria:

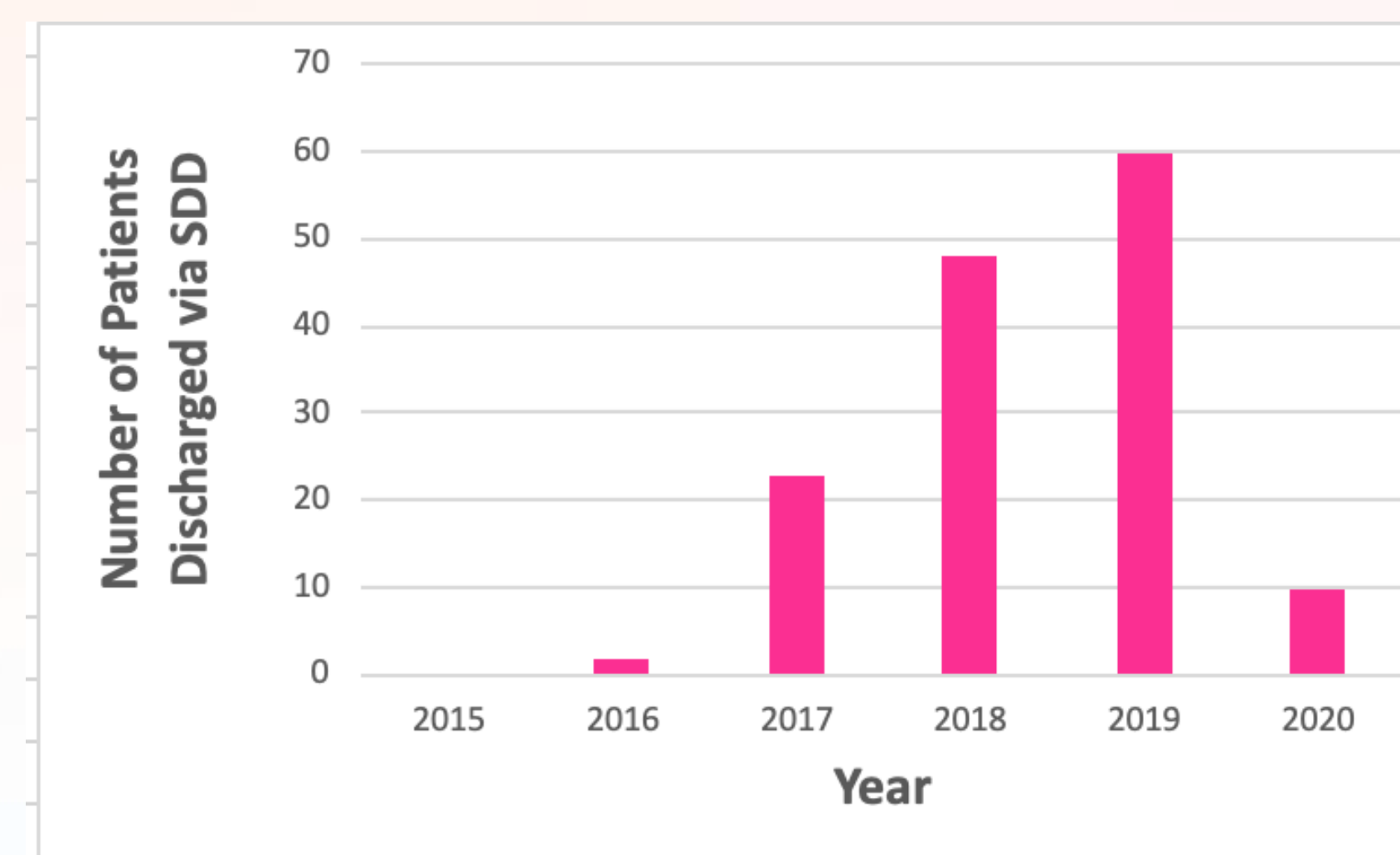
- Patient underwent a laparoscopic appendectomy procedure for perforated, complicated illness
- Patient underwent appendectomy at an outside institution

- Postoperative patient effects discharged via SDD, NDD, and with or without opioids were analyzed from January 1, 2015– June 1, 2020.
  - SDD meaning postoperative length of stay (LOS) being 0 days
  - NDD meaning postoperative LOS is 1 day (LOS>1 day were excluded)
  - Data points analyzed: 30 day ED visits, 30 day readmission, surgical site infection, duration of antibiotic use, opioid use

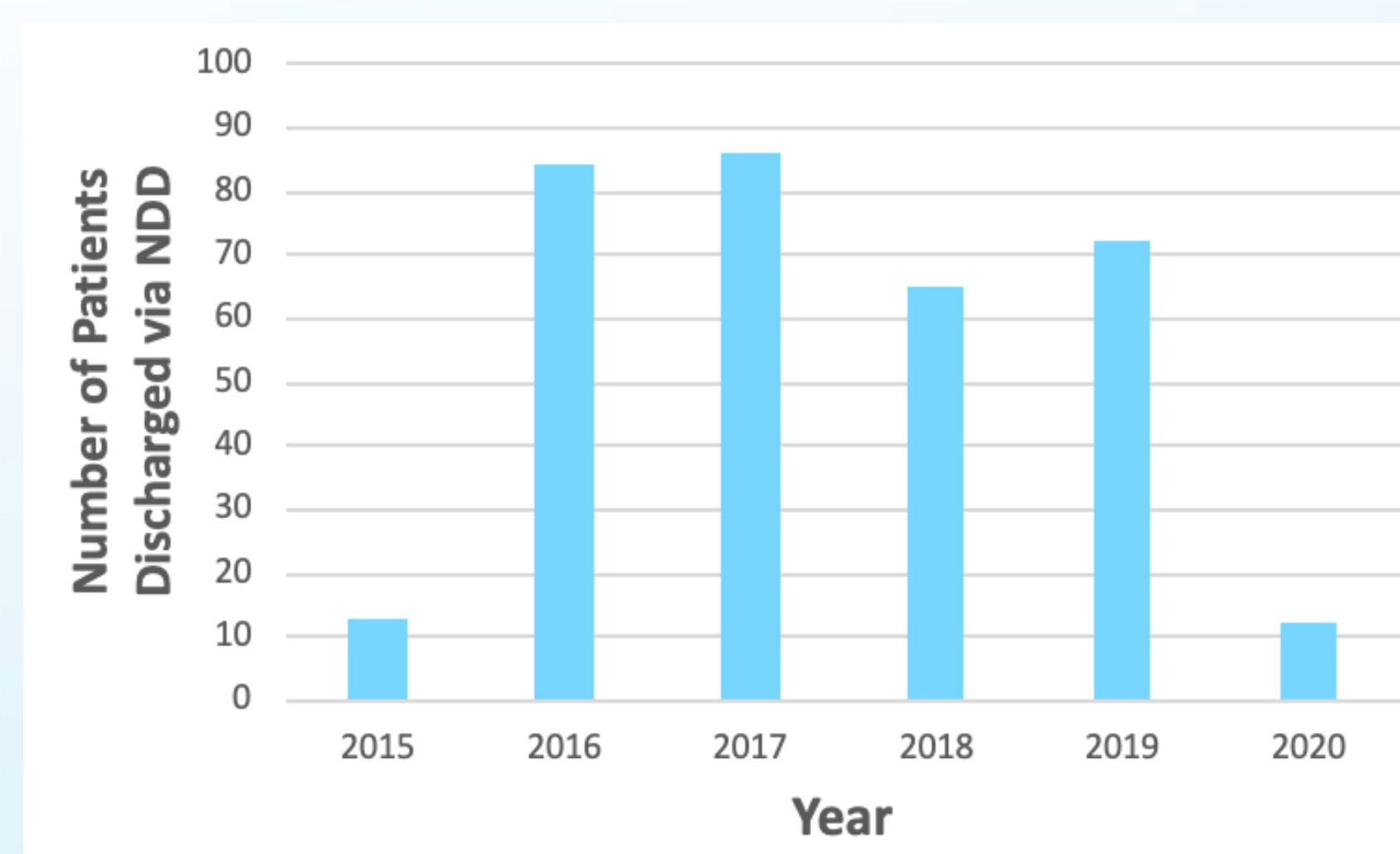
## Results

	N (% total)
<b>N</b>	678
<b>Male</b>	375 (55)
<b>Female</b>	303 (45)
<b>Average Age</b>	12

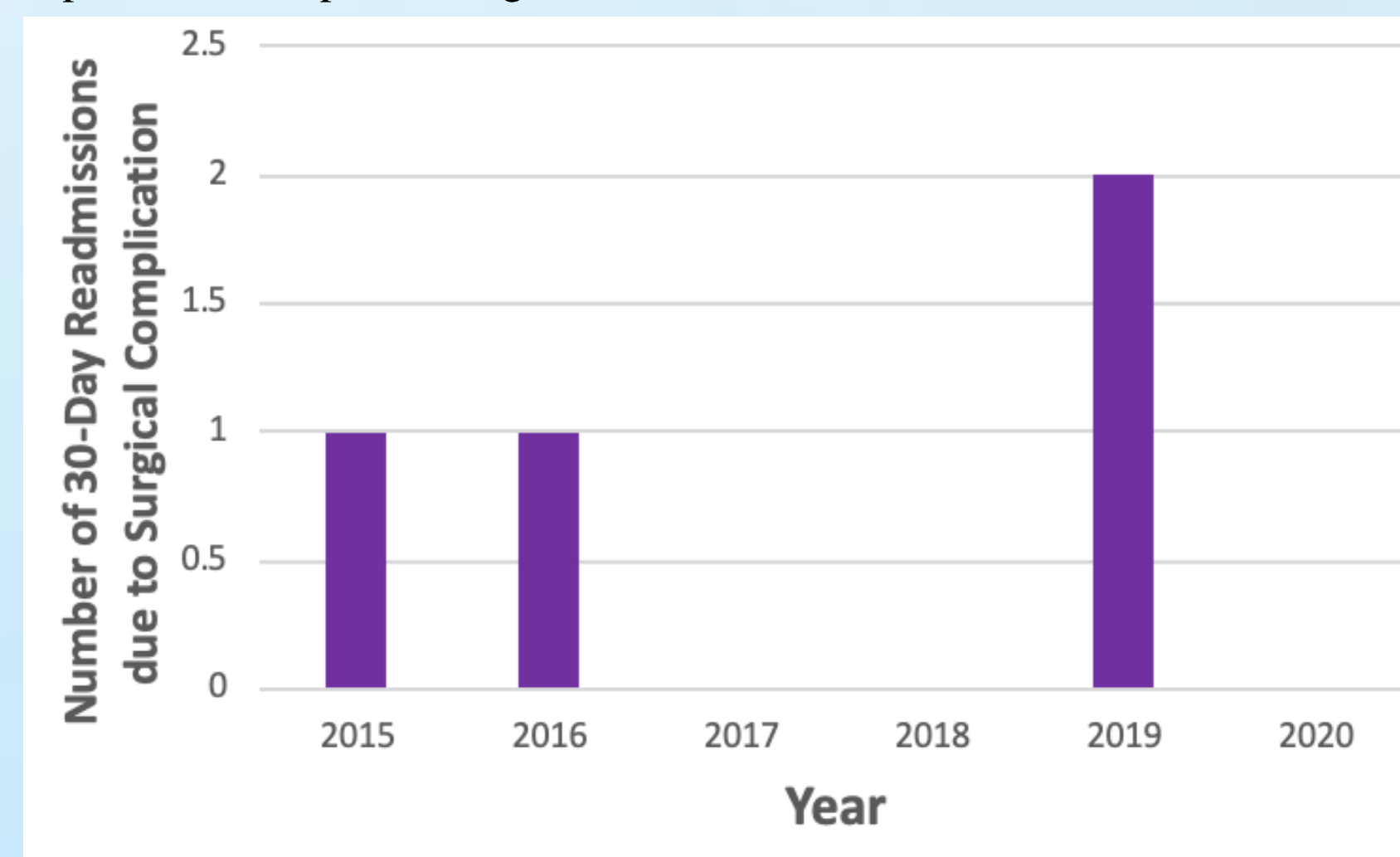
**Table 1.** Demographics of the pediatric study population who underwent acute, uncomplicated laparoscopic appendectomy procedures



**Figure 1.** The number of patients discharged via postop SDD from January 1, 2015- June 1, 2020. No opioids were prescribed for pain management.



**Figure 2.** The number of patients discharged via postop NDD from January 1, 2015- June 1, 2020. No opioids were prescribed for pain management.



**Figure 3.** The total number of patients discharged via SDD and NDD who returned within 30 days of surgery for readmission due to surgical complications. No opioids were prescribed for pain management.

## Conclusions

- The pediatric patient, neither male nor female, experienced significant difference in the postoperative outcomes studied
- Our data suggests that discharge via SDD regulations, as well as, discharge without prescribed opioids does **not** have an overall **effect** on patient care and/or 30-day readmissions for postoperative complications

## Recommendations

SDD for pediatric patients with acute, uncomplicated appendicitis

Discharge without any prescribed oral opioids for pain

Aid opioid crisis rates by reducing degree of youth in possession of prescribed opioids

### References

1. Aguayo, P., Alemayehu, H., Desai, A. A., Fraser, J. D., & St. Peter, S. D. (2014). Initial Experience with Same Day Discharge after Laparoscopic Appendectomy for Nonperforated Appendicitis.
2. Sonderman, K. A., Wolf, L. L., Madenci, A. L., Kwon, N. K., Armstrong, L. B., Wanis, K. N., Taylor, K., Uribe-Leitz, T., Koehlmoos, T. P., Ricca, R. L., Weil, B. R., Weldon, C. B., Haider, A. H., & Rice-Townsend, S. E. (2018). Opioid Prescription Patterns for Children Following Laparoscopic Appendectomy. *Annals of Surgery*, 1. doi: 10.1097/sla.0000000000003171
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