



Standardizing the Operative Note: A Way to Improve the Quality of Data Collection to Optimize Patient Care

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Introduction

General Overview

The standard surgical operative note serves an essential role in documenting the details of an operation; however, common key details of the operative note are often omitted¹⁻³. It has been demonstrated that narrative surgical operative notes do not always document key procedural details that may be clinically significant and do not allow for accurate data extraction². This study investigated the effectiveness of implementing a Laparoscopic Cholecystectomy (LC) specific, intraoperative data collection template directly into the electronic health record to be used as an addition to the standard dictated operative note.

We **HYPOTHESIZED** that intraoperative data collection would lead to a more complete operative report.

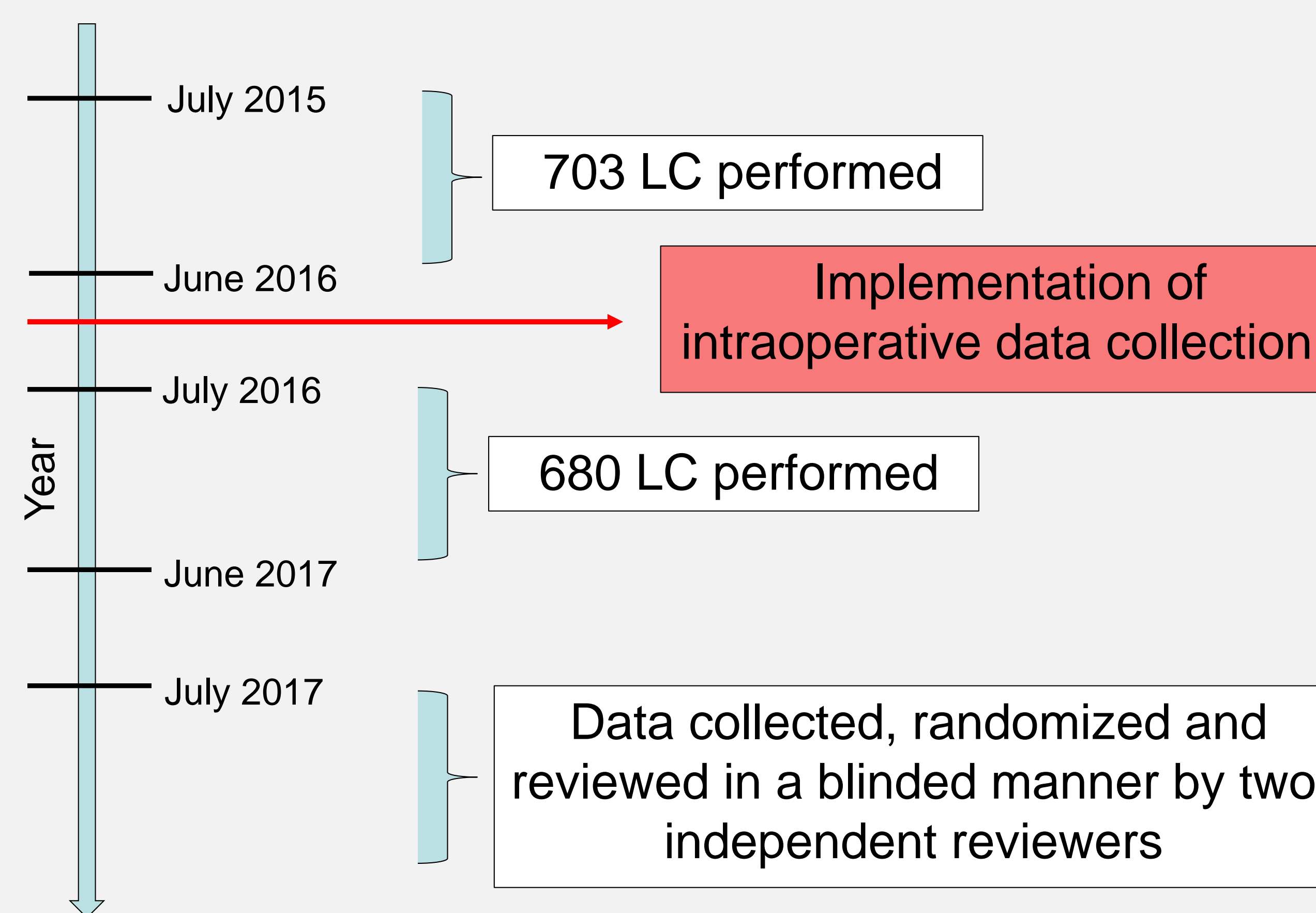
Methods

Study Design

- Single center, retrospective chart review of 891 total operative notes pre and post implementation of the LC specific operative report template from July 1, 2015 through June 31, 2017
- Analyzed 8 key data points which were included in the operative template
 1. Method of Entry
 2. Use of Retrieval bag
 3. Bile Spillage
 4. Stone Spillage
 5. Performance of Cholangiogram
 6. Drain placement
 7. Irrigation used
 8. Pre-operative antibiotics

- The template was completed intra-operatively by the circulating nurse as part of their mandatory intraoperative paperwork with verification by the operating surgeon and embedded into the electronic health record for future review
- Completion of the template was required prior to the patient leaving the operating room and was utilized during all LC performed at Reading Hospital
- Dictated operative notes pre and post implementation of the template were reviewed in a blinded manner by two independent reviews for the presence of the above 8 key data points

Study Timeline

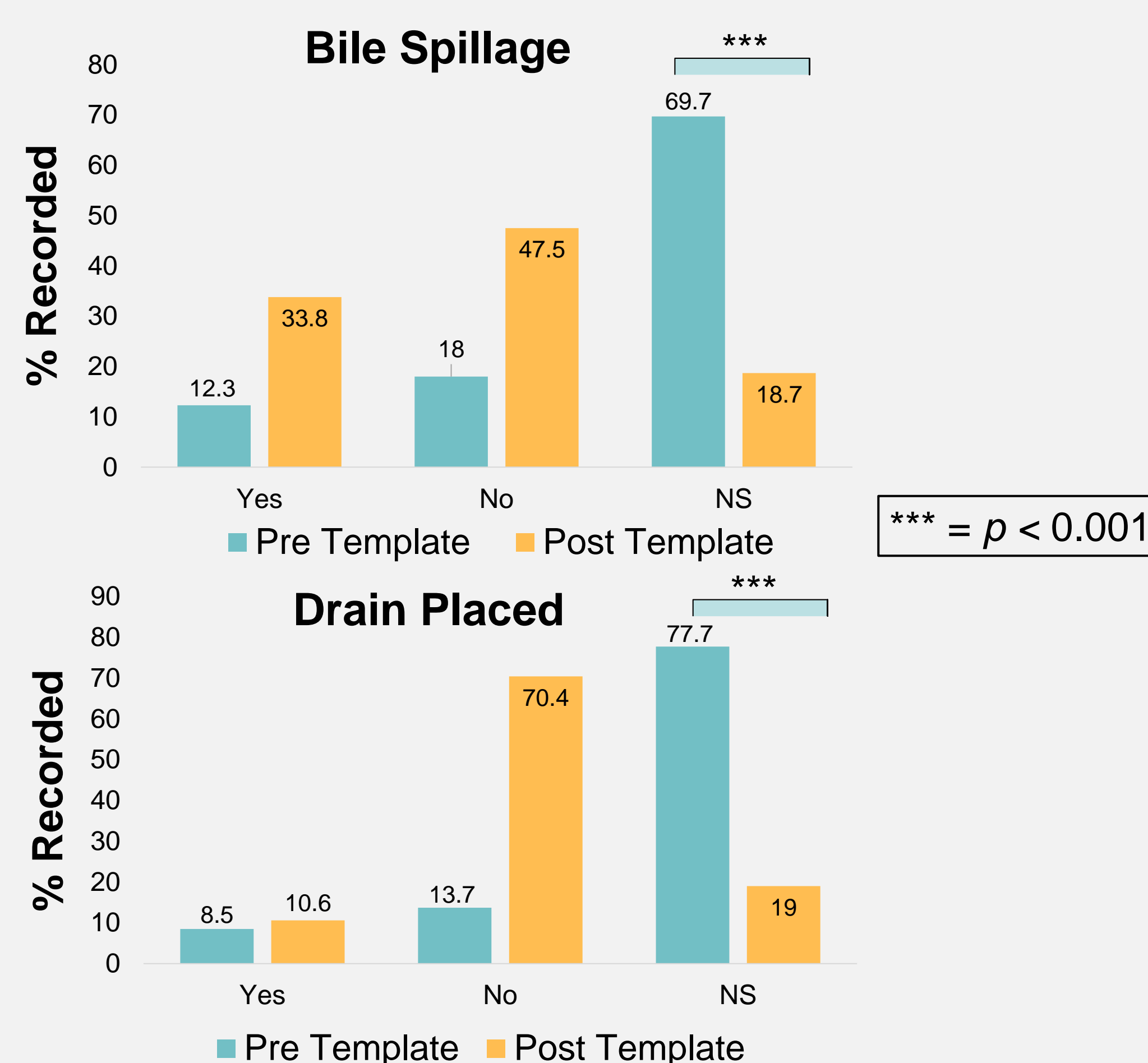


Statistical Analysis

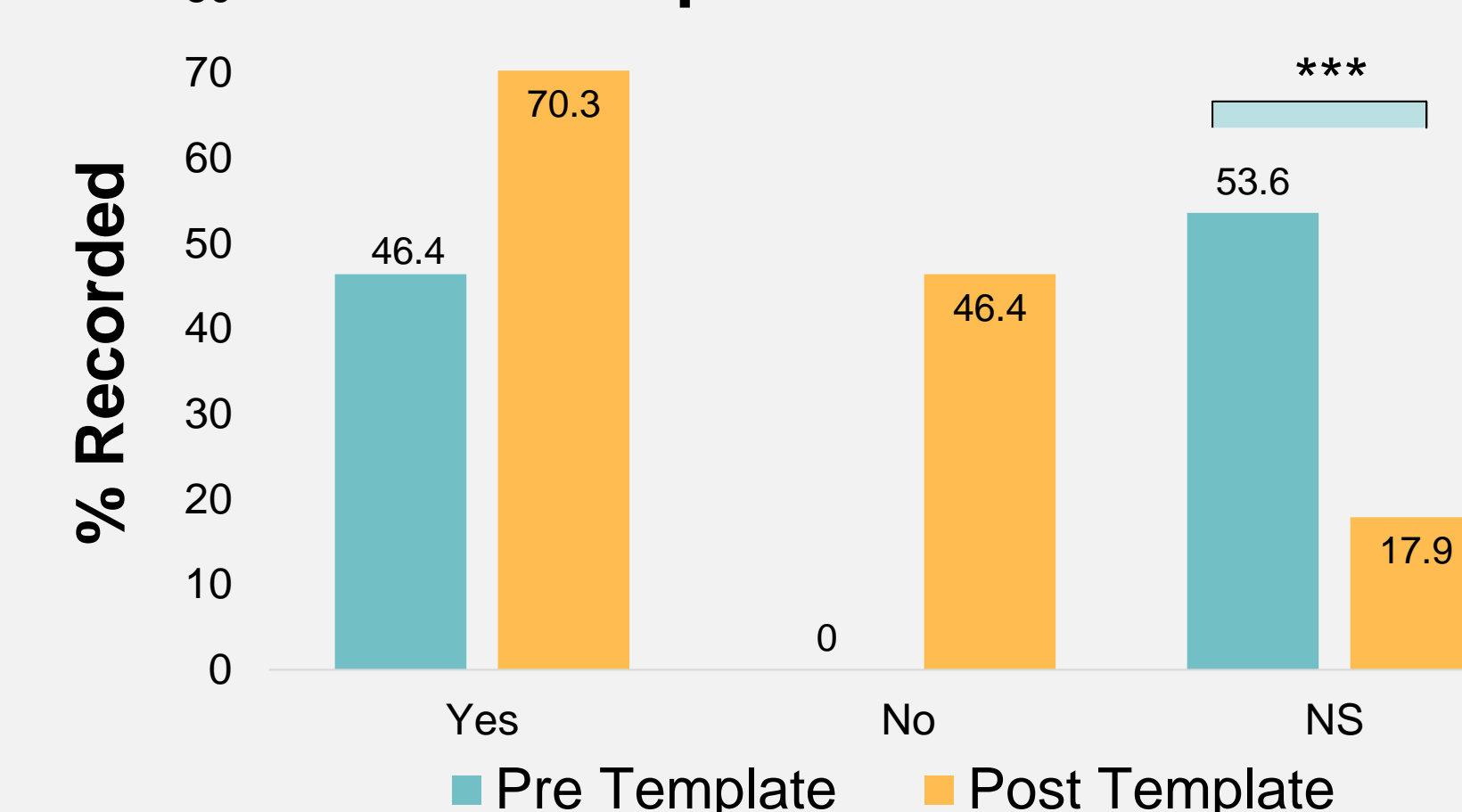
- A chi-squared test for independence and a proportions test was used with a significance set to $p < 0.005$ to compare the 8 key data points

Results

- Significantly more post-op notes in the template group included information on bile spillage, stone spillage, drain placement, irrigation, and pre-operative antibiotics, ($p < 0.001$)
- There was no significant difference seen between the control and experimental group in recording of method of entry or use of retrieval bag
- Interestingly, performance of an intraoperative cholangiogram was reported more in the control group compared to the template group, ($p < 0.001$)



Pre-op Antibiotics



Discussion

Overview of Findings

- Our study demonstrates that “real time” collection of predefined data points significantly improves the accuracy and completeness of the standard operative note

Alterations for Further Replication

- It is our hope that a standardized, operative template such as the one we developed here may be customized for any surgical operation or even other medical procedures
- Future studies should be implemented to assess the effectiveness of such intraoperative recording on operative note completeness and ease for future data extraction

Implications

- Online data collection has been initiated by the American College of Surgeons⁴, American Hernia Society⁵, and the American Society of Breast Surgeons⁶ to provide a platform for the collection of operative details and track surgical outcomes, however, these above databases require separated data entry by the surgeon
- Standardized operative notes with pre-determined data points and intraoperative recording that are directly entered into the EHR, such as the one we developed, would simplify data collection and eliminate the need for separated data entry. This would save time and minimize errors
- It is our hope that an intraoperative data entry template, such as the one utilized here, will become the standard of care for all future laparoscopic cholecystectomies and any other operative procedure

References

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