Do Better: Using NSQIP-Pediatrics to target quality improvement initiatives for appendicitis

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Do Better: Using NSQIP-Pediatrics to target quality improvement initiatives for appendicitis

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INTRODUCTION

- The American College of Surgeons National Surgical Quality Improvement Program, Pediatrics(NSQIP-P) is a national database that provides high-quality, risk-stratified data that allows hospitals to compare surgical outcomes to other participating programs.
- Appendectomy is the most commonly performed abdominal surgical procedure in the pediatric population.
- The purpose of this project was to analyze our appendectomy outcomes and compare them to national standards when available.

METHODS

- Retrospective analysis of pediatric patients undergoing appendectomy from January, 2015 to April, 2016 using the NSQIP-P database
- Outcomes Reviewed
  - Demographics
  - Average Time from ER to Diagnosis
  - Average Time from Diagnosis to Surgery
  - Average Time from ER to Surgery
  - Length of Stay
  - Radiological utilization
  - Laboratory utilization
  - Post-operative complications
  - Readmissions
- Exclusion Criteria
  - Incidental and Interval appendectomies
  - Incomplete documentation
  - Radiological and laboratory studies performed outside the network

RESULTS

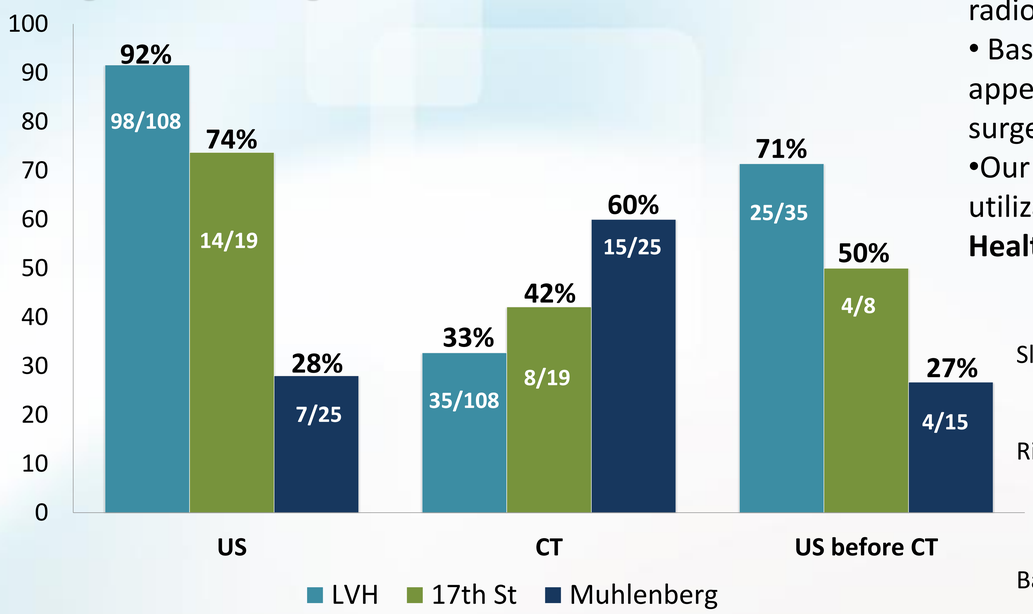
Table 1: Length of stay

	All (n=184)	Acute (n=152)	Perforated (n=32)
ER to Diag	5:12(n=146)	4:42(n=118)	5:43(n=28)
Diag to Surgery	9:42 (n=166)	9:26 (n=135)	11:30 (n=28)
ER to Surgery	15:06 (n=178)	13:15 (n=146)	16:57 (n=32)
Length of Stay	2.63	1.75	6.81

Table 2: Post-operative complications

	All (n=184)	Acute (n=152)	Perforated (n=32)
Readmission Rate	5.4%	2.0%	21.9%
Abscess Rate	5.4%	2.0%	21.9%

Figure 1: Radiological utilization



*American College of Radiology recommend that a US be performed before a CT in the diagnosis of appendicitis 100% of the time. The national average for NSQIP hospitals is 62%. The NSQIP national average for CT scan use is 25%.

Table 3a: Pre-op laboratory utilization

	All (n=151)	Repeated
CMP & BMP	116.5%	7.4%
CBC	99.3%	27.3%
PT/PTT/INR	5.3%	.7%
Sed.Rate & CRP	13.2%	0%
Urinalysis	79.5%	4.2%

Table 3b: Post-op laboratory utilization

	All (n=151)	Repeated
CMP & BMP	11.9%	27.8%
CBC	20.5%	32.3%
PT/PTT/INR	3.3%	.7%
Sed. Rate & CRP	1.3%	0%
Urinalysis	3.3%	0%

CONCLUSION/FUTURE STUDIES

- Many of our outcomes do not meet national benchmarks or norms.
- There is an over utilization of laboratory studies.
- The network does not meet national standards for the use of radiological studies.
- Based off these quality outcomes, we will be developing an appendectomy task force with members from ER, radiology, OR, and surgery.
- Our goal is to decrease length of stay, CT scan use, laboratory utilization, and post-operative complications in order to achieve **Better Health, Better Care, Better Cost**.

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