Journal of Pediatric Surgery xxx (2017) xxx–xxx

Contents lists available at ScienceDirect

Journal of Pediatric Surgery

journal homepage: www.elsevier.com/locate/jpedsurg

A prospective same day discharge protocol for pediatric appendicitis: Adding value to a common surgical condition☆

Yangyang R. Yu [a,*], Carolyn M. Smith [b], Kimberly K. Ceyanes [a], Bindi J. Naik-Mathuria [a], Sohail R. Shah [a], Adam M. Vogel [a], Kathleen E. Carberry [c], Jed G. Nuchtern [a], Monica E. Lopez [a]

[a] Division of Pediatric Surgery, Texas Children's Hospital and Michael E. DeBakey Department of Surgery, Baylor College of Medicine
[b] Decision Support, Texas Children's Hospital Outcomes and Impact Service, Texas Children's Hospital
[c] Outcomes and Impact Service, Texas Children's Hospital

ARTICLE INFO

Article history:
Received 18 September 2017
Accepted 5 October 2017
Available online xxxx

Key words:
Appendicitis
Cost analysis
Quality improvement
Same day discharge
Pediatric
Value

ABSTRACT

Purpose: Standardized clinical pathways for simple appendicitis decrease length of stay and result in cost savings. We performed a prospective cohort study to assess a same day discharge (SDD) protocol for children with simple appendicitis.

Methods: All children undergoing laparoscopic appendectomy for simple appendicitis after protocol implementation (February 2016 to January 2017) were assessed. Length of stay (LOS), 30-day resource utilization (ED visits and hospital readmissions), patient satisfaction, and hospital accounting costs for SDD were compared to non-SDD patients.

Results: Of 602 children treated at our institution, 185 (31%) were successfully discharged per protocol. SDD patients had longer median PACU duration (3.0 vs. 1.0 h, $p < 0.001$), but postoperative LOS (4.4 vs. 17.4 h, $p < 0.001$) and overall LOS (17.1 vs. 31.2 h, $p < 0.001$) were significantly shorter. Complication rates (1.6% vs. 3.1%), ED visits (4.3% vs. 6.0%), and readmissions (0.5% vs. 2.4%) were not significantly different for SDD compared to non-SDD patients. However, SDD decreases total cost of an appendectomy episode ($8073 vs $8424, $p = 0.002$), and patients report high satisfaction with their hospital experience (mean 9.4 out of 10).

Conclusions: Safe and satisfactory outpatient management of pediatric simple appendicitis is achievable with appropriate patient selection. An SDD protocol can lead to significant generation of value to the healthcare system.

Level of Evidence: Prognosis study, Level II.

Acute appendicitis is the most common gastrointestinal condition requiring urgent surgical intervention in the pediatric population [1]. Laparoscopic appendectomy has been shown to decrease length of hospitalization and lower morbidity [2,3], and has become the standard surgical technique for treating appendicitis. Current practice for managing children with simple appendicitis (nongangrenous, nonperforated) includes laparoscopic appendectomy followed by an overnight admission for observation [4,5].

Appendectomy in children accounts for 254,000 hospital days and more than $680 million in total charges annually [6]. This finding along with rising healthcare expenditures [7] has led to quality improvement endeavors aimed at increasing the value of care we provide to our patients. Value is achieved by seeking ways to decrease costs while improving the quality and efficiency of clinical care [8,9]. Recent studies demonstrate the safety and patient satisfaction with a same day discharge protocol for acute appendicitis in children [10–12]. In February 2016 we implemented a standardized same day discharge (SDD) protocol at our institution. This study describes our experience developing a protocol through a multidisciplinary team approach. Additionally, we provide a one year assessment of our protocol over a 30 day episode of care with respect to resource utilization, patient satisfaction, and economic value generated.

☆ Author contributions:
Study Conception and Design: Yangyang R. Yu, Kathleen E. Carberry, Bindi J. Naik-Mathuria, Sohail R. Shah, Kim Ceyanes, Jed Nuchtern, Monica E. Lopez.
Acquisition of Data: Yangyang R. Yu, Carolyn M. Smith, Kimberly K. Ceyanes.
Analysis and Interpretation of Data: Yangyang R. Yu, Carolyn M. Smith, Monica E. Lopez.
Drafting of Manuscript: Yangyang R. Yu, Monica E. Lopez.
Critical Revision of Manuscript: Yangyang R. Yu, Bindi Naik-Mathuria, Carolyn Smith, Adam Vogel, Sohail R. Shah, Kimberly Ceyanes, Kathleen Carberry, Jed Nuchtern, Monica E. Lopez.

* Corresponding author at: Texas Children's Hospital / Baylor College of Medicine, One Baylor Place, Suite 404D, Houston, TX 77030. Tel.: +1 305 742 3838; fax: +1 832 825 3141.
E-mail address: yxyangya@texaschildrens.org (Y.R. Yu).

https://doi.org/10.1016/j.jpedsurg.2017.10.011
0022-3468/

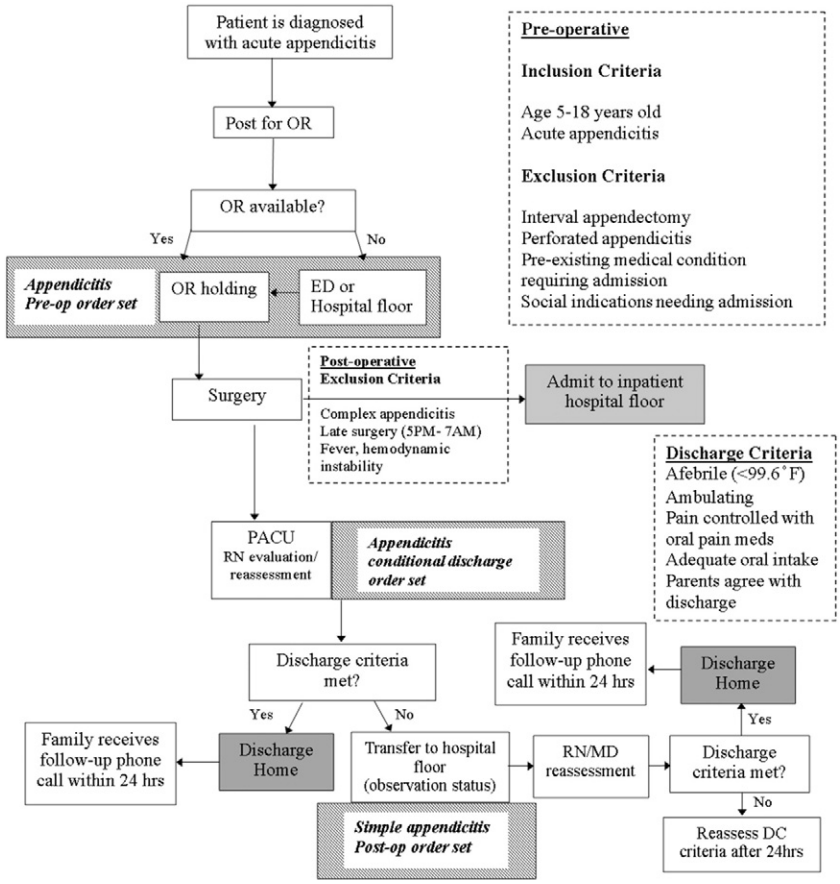

Fig. 1. Same day discharge protcol for simple appendicitis.

We hypothesize the implementation of a standardized same day discharge protocol for simple appendicitis will generate value to the healthcare system by decreasing hospital length of stay and costs while demonstrating safety and promoting patients' satisfaction.

1. Materials and methods

1.1. Multidisciplinary approach to protocol design and provider education

Care providers in all stages of a patient's care were invited to participate in the development of a SDD protocol [Fig. 1]. Focus groups held in 2015 identified barriers to implementation and devised strategies to overcome these barriers. We identified a need to address family expectations regarding their hospital course early on. Our institutional age-appropriate educational pamphlets describing the diagnosis of appendicitis were revised to incorporate information on a same day discharge pathway. These handouts are distributed by emergency room providers at the time of diagnosis.

Anesthesia staff were consulted to assist in achieving adequate pain control and minimizing postoperative nausea and vomiting to help patients meet discharge criteria. Postanesthesia care unit (PACU) leadership agreed to discharge of patients from PACU Monday through Friday between 7 am and 5 pm. Monitoring in the PACU occurs for up to 4 hours with discharge criteria assessments performed at 2 hour intervals. A clinical decision support tool within the electronic medical record (EMR) in the form of a conditional order set was created. The order set allows for an opt-out discharge procedure whereby PACU staff can discharge the patient without an additional discharge order from the physician if patient meets discharge criteria. As PACU staffing is limited in the evenings and during the weekends, patients continue their recovery after surgery on the hospital floor but remain eligible for same day discharge. Floor nurses conduct reassessments for discharge criteria and notify providers when these are met.

With regard to provider education, information was disseminated to attending surgeons and advanced practice providers (APP) during faculty meetings. Nursing leadership on the hospital floor were educated on the protocol by means of a PowerPoint module. Additionally, residents were educated on the protocol during their monthly prerotation orientation. To educate patients on postsurgical recovery, an instruction pamphlet was distributed at the time of discharge detailing what to expect after leaving the hospital, including return precautions and contact information.

1.2. Patients

Following institutional review board approval (H-37142), our protocol was implemented in February 2016. All children ages 5–18 years old with acute appendicitis undergoing laparoscopic appendectomy were eligible. Preoperative exclusion from the protocol included perforated appendicitis, preexisting medical conditions requiring inpatient admission, and social indications (i.e. extensive travel, lack of resources to provide acute care after surgery). Patients with complex appendicitis (gangrenous or perforated) identified intraoperatively were also excluded.

We defined same day discharge as surgery performed after 7 am with discharge occurring prior to midnight the same day of the operation. All patients with surgery performed between midnight and 7 am were not considered SDD even if they were discharged on the same calendar-day. These patients were admitted to the hospital floor and received the standard evaluation including having the surgical team round on the patient in the morning.

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1.3. Follow-up and patient satisfaction

All SDD patients were contacted by telephone within 24 hours of discharge to assess their recovery by the surgical team or research staff. A telephone script and a standardized same day discharge appendectomy phone follow-up template were created for documentation within our EMR (Epic Systems software, Verona, WI). Alarming symptoms would prompt the caller to notify the on-call physician and document this within the template.

1.4. Clinical outcomes

Patients successfully discharged under the SDD protocol from February 2016 through January 2017 were compared to simple appendicitis patients who required overnight admission (non-SDD) during the same time period. Postoperative resource utilization included ED visits, readmissions to the hospital, and reoperations occurring within 30 days of discharge. We defined a complication as any postsurgical condition requiring ED visit, readmission, or reoperation. Surgical site infections were defined according to the Centers for Disease Control and Prevention guideline [13]. Duration of the various phases of care and length of stay (LOS) were calculated using timestamp data available in the medical record.

1.5. Cost analysis

Costs were compared for the initial admission alone and for an episode of care, which included the initial admission and a period of 30 days after discharge. Direct variable costs, total costs, and payments received (revenue) were analyzed. Margins were estimated by subtracting hospital accounting total costs from the payments received. Physician and outpatient pharmacy costs were not included in our economic analysis; nor were education and implementation costs. The institution's internal costing system, Allscripts Enterprise Performance Systems Inc. (Allscripts Healthcare Solutions, Inc., Chicago, IL), provided patient-level costs.

1.6. Statistical analysis

Owing to the nonparametric distribution of data, medians and interquartile ranges (IQR) are reported. Mann Whitney *U* tests and χ^2 of Fisher exact tests were performed to assess differences between groups for continuous and categorical variables, respectively. Statistical analysis were performed using IBM SPSS Statistics for Windows, version 24 (IBM Corp., Armonk, N.Y., USA). A p-value <0.05 was considered significant.

2. Results

2.1. Demographics

From February 2016 to January 2017, 602 children with simple appendicitis were treated at our institution. Overall median age was 11.4 years (IQR 8.8–14.0 years) and 64% were male. There were 214 patients (36%) who completed their operation during the SDD protocol eligibility period (Monday–Friday 7 am–5 pm). Sixty-two percent ($n = 132$) were successful SDD. Of the 82 eligible patients admitted overnight, 32 (39%) failed to meet discharge criteria. Surgeon preference for additional IV antibiotics resulted in admission of 15 patients (18%). Parental agreement with discharge was a component of the discharge criteria. Parents were uncomfortable with discharge in 9 patients (11%). Twenty-six patients (32%) did not have a documented reason for admission. Out of 388 (64%) patients who had weekend or late surgeries, 53 (14%) were SDD, resulting in a total of 185 (31%) SDD patients during the 1 year study period.

2.2. Clinical outcomes

SDD and non-SDD patients had similar intraoperative and procedure times [Table 1]. Median PACU length of stay for SDD patients was 3 hours (IQR 1.8–4.3 hours), which was significantly longer than the 1 hour (IQR 0.7–1.5 hours) PACU LOS for non-SDD patients. Total LOS for SDD patients was 16.4 hours compared to 26.1 hours in non-SDD patients. Interestingly, we found that SDD patients had a significantly longer preoperative LOS by more than 3 hours compared to non-SDD patients. When grouped by time of admission and surgery start time, we found that the majority of SDDs were admitted from 5 pm to midnight and operated on from 7 am to 5 pm [Table 2]. There were also changes in the distribution of patient classifications. Compared to 13.3% of non-SDD patients who were classified as inpatients, only 4.4% of SDDs were inpatients ($p = 0.001$).

There were no statistical differences with regard to 30 day ED visit, readmission and reoperation rates between groups [Table 1]. Total complication rate was 2.7% in our study population and not statistically different between the two groups (3.1% vs. 1.6%, $p = 0.29$). Of two patients with bleeding complications, one patient required reoperation for hemoperitoneum. There were six superficial or deep incisional surgical site infections and five organ-space surgical site infections.

2.3. Patient satisfaction

Telephone follow-up was successfully completed in 104 patients (56%). Pain was well-controlled in 90% of respondents with average reported pain score of 4/10. 81% filled their narcotic pain medication prescription and 75% reported taking the medication by the time of the telephone follow-up. Six patients reported fever, 10 had nausea/vomiting, and 5 respondents indicated wound concerns. Wound issues reported were minor, such as itching or dried blood, and were adequately addressed over the telephone. The one patient with fever who went to the ED had a normal ultrasound and a viral etiology was diagnosed. No patients reporting symptoms required readmission or reoperation. Average satisfaction of recent hospitalization reported was 9.4/10 (range 5–10). 88% reported patient satisfaction of 8 or higher and 76% gave a score of 10/10. There was 100% satisfaction with receiving a telephone follow-up.

2.4. Economic evaluation of value

With SDD, median direct variable cost of admission and total cost of admission decreased from $3515 to $3342 (5% reduction, $p = 0.001$) and $8296 to $8073 (2.7% reduction, $p = 0.007$), respectively [Table 3]. For an episode of care, the reductions were 6% and 4.2%, respectively. The median total episode reduction of $351 per SDD patient amounts to an approximate savings of $64,584 over the study period. Median total PACU costs were significantly higher in SDD patients compared to non-SDD ($1185 vs. $551, $p < 0.001$). With the implementation of SDD, the per patient revenues for an episode decreased from $9845 to $8946 (9.1% reduction, $p = 0.06$). Median total margin for an episode also decreased from $966 to $383 in SDD patients ($p = 0.54$).

3. Discussion

Implementation of a same day discharge protocol at our institution increased the value of surgical care for children with simple appendicitis by shortening hospital length of stay and lowering costs. Although postoperative resource utilization and clinical outcomes such as complication rates were similar, SDD led to a 10 hour decrease in duration of hospital stay. Careful patient selection according to specific discharge criteria and close follow-up within 24 hours allow SDD to be safely applied in children with simple appendicitis. This approach results in high patient satisfaction. Overall, total costs decreased by 4.2%, approximately $351 per patient, with an estimated annual cost savings of $64,584

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Table 1
Outcomes of patients discharged under SDD compared to those patients who were admitted during the study cohort. Durations are expressed as medians (IQR) and resource utilization outcomes occurred within 30 days of discharge.

Outcomes	Overall N = 602	SDD n = 185	Non-SDD n = 417	p-value
Preoperative LOS (h)	8.6 (5.0–13.2)	10.6 (6.8–13.6)	7.2 (4.4–12.4)	<0.001
Intraoperative LOS (min)	70 (56–82)	68 (56–83)	69 (55–82)	0.91
Procedure duration (min)	34 (27.0–44.0)	33 (27.5–43)	35 (27–44.5)	0.25
PACU duration (h)	1.2 (0.8–2.5)	3.0 (1.8–4.3)	1.0 (0.7–1.5)	<0.001
Postoperative LOS (h)	14.5 (6.8–19.3)	4.4 (3.1–6.2)	17.4 (14.3–21.8)	<0.001
Total LOS (h)	22.5 (17.9–32.3)	16.4 (13.5–20.2)	26.1 (20.8–37.4)	<0.001
ED visits	33 (5.5%)	8 (4.3%)	25 (6.0%)	0.41
Readmission	11 (1.8%)	1 (0.5%)	10 (2.4%)	0.19
Reoperations	5 (0.8%)	1 (0.5%)	4 (1%)	0.69
Complications	16 (2.7%)	3 (1.6%)	13 (3.1%)	0.29

over the study period. Our multidisciplinary approach for SDD in children with simple appendicitis is an effective value-generating proposal.

Success of this protocol at our institution can be attributed to a number of factors. First, identification and early involvement of key stakeholders ensured a unified presentation of this pathway to our patients. Early management of patient expectations for their hospitalization increased patient acceptance of this practice. Our 11% parental refusal is lower than the 16% of families declining to participate in same day discharge previously reported by Alkhoury et al. [11]. Secondly, at our institution there is a culture that focuses on improving value and iterative analysis of our processes. Over the years, multiple quality improvement projects have been implemented to decrease length of stay and complications in our management of appendicitis [2,14,15]. In 2012, we implemented a fast track nursing-driven order set and family educational pamphlet intervention which decreased postoperative length of stay for patients with simple appendicitis to a median of 25 hours [16]. Our current median postoperative length of stay is 15 hours overall and 4.4 hours for SDD patients. In a series of 92 pediatric patients discharged within 24 hours of surgery, Akkoyun [17] reported a 14 hour postoperative LOS.

Putnam et al. [12] found that the majority of appendectomies were performed between 7 am and 6 pm; this is also seen in our cohort where 61% of cases are performed between 7 am and 5 pm. Patients with procedures performed between midnight and 7 am who are discharged on the same calendar-day were not considered SDD in our analysis as their management was according to the traditional pathway. Many studies define SDD as ≤24 hours postoperative stay. Putnam et al. [12] report a same-calendar day discharge rate of 32% and ≤24 hours from surgery discharge rate of 58%. Our SDD rate was 31% in this study; however, if we defined SDD as ≤24 hours from surgery, our rate would be 89%, which is within reported rates of 58%–92% [12,17] in pediatric studies. Hospital setting, OR availability, PACU staffing and surgeon coverage may play a role in the successful implementation of a same day discharge protocol. We believe that this pathway is feasible and reproducible across hospitals with varying resources and levels of support. This can be achieved by applying a multidisciplinary approach to protocol development in which all stakeholders are engaged in the planning phase of the intervention. This yields an inventory of preexisting workflows and patient care processes that can then be integrated into the protocol. At our institution the SDD intervention was deployed across two campuses, our main academic teaching hospital and a community-based hospital. While 60% of patients in our cohort were treated at our academic teaching hospital, the rate of SDD was similar at our academic and community-based hospital campuses (29% and 33%, respectively). Differences in OR, PACU and surgeon availability across campuses were considered as the protocol was adapted to each location. For example, owing to the number, type and rapid turnover of elective cases done at the community campus, the PACU observation period of up to 4 hours was not feasible there. However, we maintained a flexible approach to implementation and capitalized on a process already in place for ongoing monitoring of the patients on the floor by anesthesia and surgical APP staff, which allowed us to adhere to our goal of expedited discharge the same day of surgery. Operating room availability may also play a role in the success of a same day discharge protocol. Patients with procedures performed during normal business hours with full staff support are more likely to be sent home the same day after surgery. However, we do not believe it necessary to have an operating room available 24 hours to be able to see similar results as we report. Children whose operation ends after midnight are unlikely to be immediately sent home owing to parental concern or surgeon preference. While our SDD definition limited the number of eligible patients based on time of presentation and surgery, having mechanisms in place for continued reassessment of discharge readiness outside the protocol allowed us to capture many more patients. When we define SDD as any patient with postoperative length of stay less than 24 hours, our rate increases to 89%. In our cohort, time periods with limited staffing and support such as weekends and late surgeries accounted for 80% of patients who were not SDD.

Table 2
Association between admission time or surgery start time and same day discharge.

Preoperative LOS parameters	SDD n = 185	Non-SDD n = 417	p-value
Admission time			
12:00 am–6:59 am (n = 137)	61 (33%)	76 (18%)	<0.001
7:00 am–4:59 pm (n = 290)	55 (30%)	235 (56%)	
5:00 pm–11:59 pm (n = 175)	69 (37%)	106 (25%)	
Surgery start time			
12:00 am–6:59 am (n = 26)	1 (0.5%)	25 (6%)	<0.001
7:00 am–4:59 pm (n = 368)	184 (99.5%)	184 (44%)	
5:00 pm–11:59 pm (n = 208)	0 (0%)	208 (50%)	

Achieving value in healthcare relies on balancing outcomes with cost. In terms of resource utilization and outcomes, our results are similar to reported pediatric ED visits of 4.8%–7.4% [12,18], readmission rates of 0.7%–2.5% [4,18,19], and postoperative complication rates of 0.7%–8% [4,18]. Initial economic evaluations of pediatric SDD procedures showed reductions of $2140–$4111 in hospital charges per patient [10,20]. If applied universally, SDD can lead to an estimated annual healthcare savings of $921 million [21]. Our cost analysis showed significant reductions in direct variable and total cost. Although SDD had longer PACU durations and higher total PACU cost, these increases were offset by the cost savings derived from a shorter overall length of stay. In our study, total revenues and margins decreased following SDD, suggesting that current reimbursement programs may not be rewarding value-generating behaviors. Reimbursements differ by diagnosis, disease severity, payor and patient classification. Our protocol led to a significant redistribution of patients from the inpatient

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Table 3
Comparison of hospital-derived financial data.

Cost	SDD Median (IQR) (n = 184)	Non-SDD Median (IQR) (n = 416)	Overall Median (IQR) (N = 600)[a]	p-value
Direct variable cost of admission	$3342 ($2933–$3730)	$3515 ($3039–$3991)	$3430 ($2998–$3890)	0.001
Total cost of admission	$8073 ($6734–$9004)	$8296 ($7103–$9520)	$8210 ($7012–$9360)	0.007
Direct variable cost of episode	$3342 ($2938–$3784)	$3561 ($3067–$4082)	$3478 ($3006–$3964)	<0.001
Total cost of episode	$8073 ($6748–$9093)	$8424 ($7207–$9725)	$8291 ($7060–$9568)	0.002
Total PACU costs	$1185 ($842–$1587)	$551 ($544–$710)	$693 ($551–$1027)	<0.001
Revenue and margin	**SDD Median (IQR) (n = 162)**	**Non-SDD Median (IQR) (n = 372)**	**Overall Median (IQR) (N = 534)[b]**	**p-value**
Total revenue for admission	$8713 ($6243–$12,802)	$9599 ($6734–$13,240)	$9396 ($6549–$13,127)	0.07
Total margin for admission	$383 (−$1577–$4935)	$1135 (−$1583–$5040)	$861 (−$1575–$4969)	0.46
Total revenue for episode	$8946 ($6275–$12,862)	$9845 ($6796–$13,289)	$9546 ($6587–$13,189)	0.06
Total margin for episode	$383 (−$1607–$4935)	$966 (−$1661–$5090)	$743 (−$3652–$743)	0.54

[a] Data were not available for 2 patients.
[b] Data were not available for 2 patients and 66 patients were excluded owing to unknown amount of payments.

to the outpatient classification. Different costing methodologies that may better reflect the impact of quality improvement interventions on cost are being studied. One such methodology is time-driven activity based costing which determines cost according to duration of resource use. In a previous study, we found that this methodology resulted in a 17% reduction in total direct variable costs ($2753 vs. $3303) compared to traditional accounting [22].

Strengths of this study include 1-year assessment of a standardized SDD protocol at a large volume pediatric institution, prospective assessment of safety and satisfaction, and a comprehensive cost analysis. Additionally, our EMR incorporates timestamps throughout the patient's hospitalization, allowing accurate assessment of durations. Another strength was the availability of clinical decision support tools to assist with implementation. A limitation of this study was the retrospective review of complications, readmissions, and ED visits. Thus, the reported rates may underrepresent actual rates if patients sought care outside of our institution's network. Additionally, incomplete documentation made it difficult to determine the reason for patients who required admission. There also may be a potential for selection bias in comparing the SDD with non-SDD patients, as there may be underlying clinical factors in non-SDD patients that precluded them from meeting discharge criteria which may put them at increased risk for other postsurgical complications. However, we believe this bias to be small since disease severity was ascertained in the same manner in both groups, and 80% of non-SDD patients did not appear to have specific clinical reasons for overnight admission other than the fact that their surgery was performed late, after 5 pm, or on the weekend when staffing was limited. Moreover, among those non-SDD patients specifically admitted for failure to meet discharge criteria, the majority had symptoms related to postoperative nausea and vomiting as related to recovery from anesthesia. Finally, our protocol included an early follow-up safety net to capture patients who may not be recovering appropriately after SDD. We were unable to perform an early assessment or query satisfaction in 44% of SDD patients.

4. Conclusion

Implementation of a multidisciplinary same day discharge protocol that incorporates patient educational materials, integrates with an existing EMR system through clinical decision tools, and includes early follow-up within 24 hours of discharge is feasible. We show that our experience generates value by decreasing length of stay and costs without increasing resource utilization or complication rates. The decrease in total costs led to an estimated total savings of $64,584 during the study period. Future endeavors include protocol expansion and implementing similar strategies for other surgical procedures that may benefit from same day discharge in the pediatric population.

Appendix A. Discussions

Yangyang Yu, Houston TX

RICHARD PEARL (Peoria, IL) That was really very nice. I kind of wish that we could have connected the dots with all the appendectomy papers put together and presented as a group. We are currently doing a collaborative study with Lurie, Comer, and our hospital doing a very similar thing, and we'll probably have data in a few years. We'll see how it works out, but I'd like the audience to remember that we've now converted acute appendicitis to an outpatient disease, but our medical colleagues are pushing to admit kids, give them medical therapy for a couple of days, and then see what happens after about a year or two. The data is not that good when you actually look at the long-term results of medical therapy for appendicitis with recurrence rates, depending on what type of you want to rate, in the teens up to 30% in the first year, so we have outpatient therapy, discharge in 4–6 h, almost no complications, happy families, where if we use medical therapy for acute appendicitis, the data is on the other side of the fence. So, well done, and you should remind your folks that it doesn't look as good if you don't take the appendix out. Thank you.

YANGYANG YU Thank you for your comments.

STEVEN STYLIANOS (New York, NY) I would rise just to say don't be pessimistic about the financial aspects. Others may use that against you, but remember that when you send that child home from the PACU, you have another bed at the hospital to sell to another customer, and when you factor that in you're going to come out way ahead, so great work.

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YANGYANG YU Thank you. There has been sort of a paradigm shift in terms of reimbursements being more value based and a lot of different strategies for how to incentivize providers and hospitals, and I think just having this data for some specific disease processes would allow us to evaluate whether a specific reimbursement plan might be more favorable than others. Just having this information will help in terms of negotiations and improving the value that we are being reimbursed for.

PHILIP GLICK (Buffalo, NY) Great study. You had all the data there. Now, how are you going to use it? And you just mentioned that it may be used for negotiations. With whom? The third-party payers, the hospital? You know, clearly we need to start saving money in this country, so we can give healthcare to everyone who needs it, and we are on an unsustainable trajectory right now. What is the plan in Texas at your hospital using this data to either go to the hospital and tell them what a great job you're doing or go to the third-party payers and tell them that they need to adjust their reimbursement.

YANGYANG YU Certainly. We are definitely trying to improve our processes internally and to continue to improve the value that we're providing our patients. One thing about value, it's traditionally defined as the outcomes achieved per dollar spent, and so reimbursement isn't in that equation for value. However, reimbursement is something that is constantly changing with different agreements for each hospital and payer type which can change over time and be re-negotiated, and so that is definitely some information that we can use. Depending on our specific distribution of payers to go back to them and say that we are increasing the value and decreasing cost, and to incorporate some incentives from that aspect. We have also been looking into alternative payment models. Bundled payments and shared savings are reimbursement strategies where providers are supposed to be incentivized to meet quality improvement metrics. Once they meet those metrics through negotiations with the payer any savings would be shared among the payer and the hospital. For certain medical conditions and diseases those improved performance metrics may result in savings to share, but in this case where we've moved a lot of — reimbursements for inpatients and outpatients differ quite significantly, and we've moved a number of our patients that would have been classified as inpatients and reimbursed as such to the outpatient category, we find that although we've met those quality metrics, there were no savings accumulated to share. So this particular reimbursement strategy might not be the preferred scheme to choose for this diagnosis.

PHILIP GLICK You know, if you prospectively gain share with the hospital, that is, incentivize the surgeons to save this money, it's not a Stark violation if they give you some of that money to put in your own department's pocket.

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Please cite this article as: Yu YR, et al, A prospective same day discharge protocol for pediatric appendicitis: Adding value to a common surgical condition, J Pediatr Surg (2017), https://doi.org/10.1016/j.jpedsurg.2017.10.011