

# E-mail Instructions to Decrease Same Day Surgery Cancellations

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# Acknowledgements

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# Background

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- **Same day surgery cancellations are costly.**
- **Most common reasons for surgical cancellations in adult and pediatric patients are due to missed preoperative instructions.**

# Gap Analysis

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- **Increasing same day cancellations.**
  - **Patients remember written preoperative instructions over verbal instructions.**
  - **Clinical advantages of email communications;**
    - **Efficiency**
    - **Cost-effectiveness**
    - **Can be send outside of traditional office hours**
    - **Messages can be archived and retrieved at a later time**
- (Goyder, Atherton, Car, Heneghan, & Car, 2015; Vetter, Downing, Vanlandingham, Noles, & Boudreaux, 2015)

# Literature Review

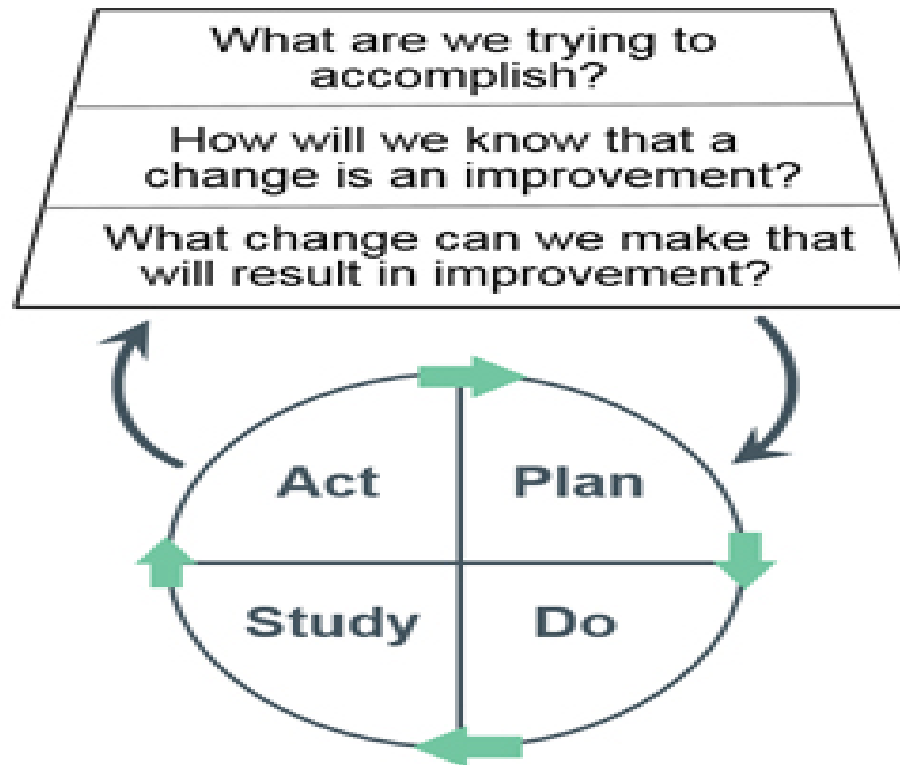
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- **Pohlman et al. (2012) - reasons for same day cancellations in outpatient pediatric urology.**
- **Pratap et al. (2015) - quality improvement project to address pediatric surgery cancellations due to no-shows, and NPO violations.**
- **Weems et al. (2016) - caregiver response to electronic communication.**
- **Gordon et al. (2015) - effectiveness of electronic communication.**
- **Dombkowski et al. (2014) - feasibility of email appointment reminders.**
- **Vetter et al. (2014) - effectiveness of preoperative medication instruction compliance in a preoperative setting.**

# Framework: Plan-Do-Study-Act

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## Model for Improvement



# Inquiry Question

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**How does emailed preoperative instruction in addition to preoperative instructions by nurse phone call compare to only preoperative instructions by nurse phone call effect same day cancellations in pediatric patients undergoing general anesthesia?**

- **Objectives:**
  - **Determine reasons for same day cancellation.**
  - **Decrease same day cancellations due to no shows, NPO violations, and recent illness.**

# Methods

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- **Non-experimental convenience sampling.**
- **Implemented at a pediatric facility in North Texas.**
- **This project was exempt for Human Subjects review.**
- **Pre- Intervention – telephone call preoperative instructions.**
- **Post- Intervention – emailed preoperative instructions along with telephone call communication.**
- **Phone call and cancellation data obtained from the medical record.**



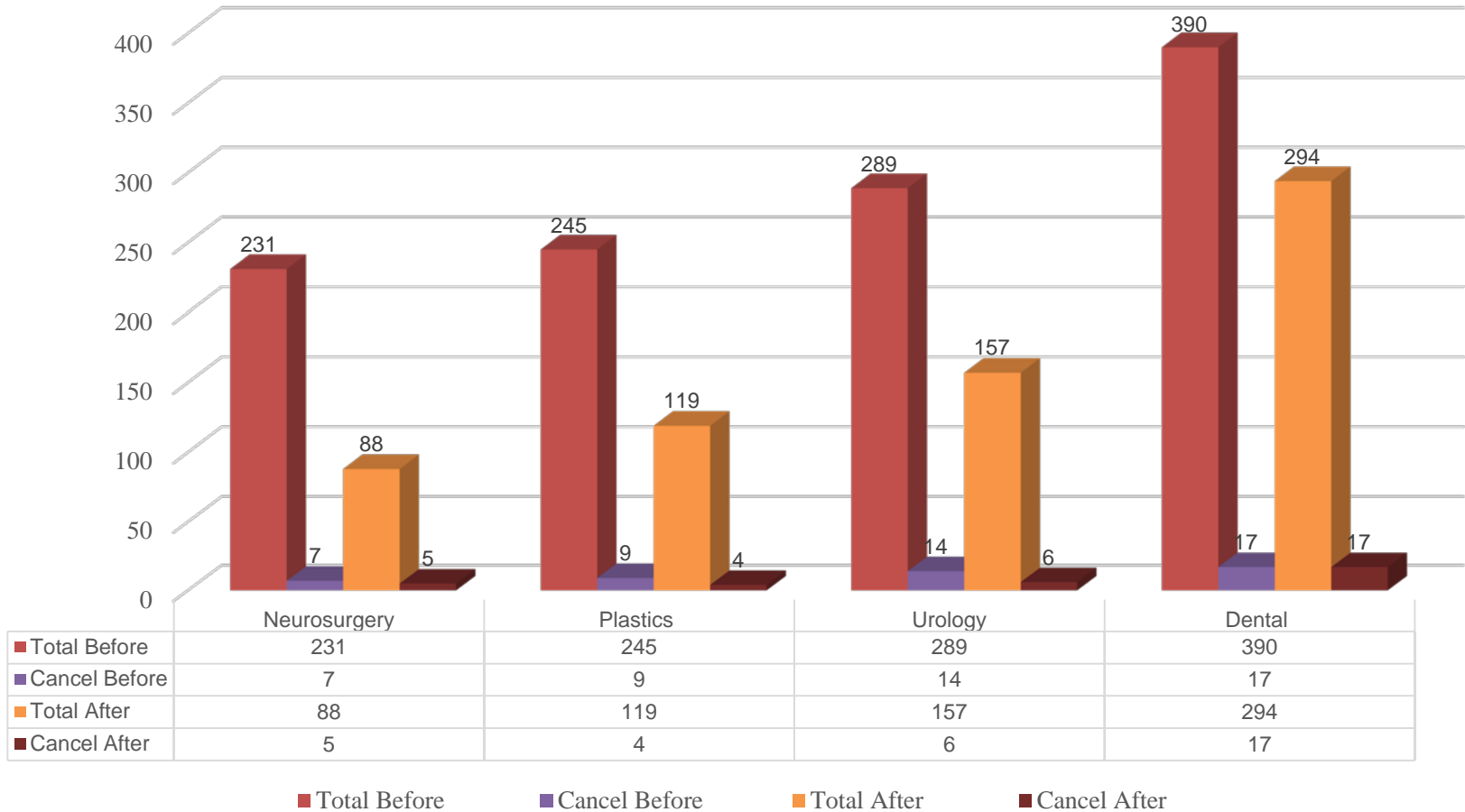
# Data Analysis

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- **Retrospective and prospective data collected using the electronic medical record.**
- **Chi-square test.**
- **Mann-Whitney U test.**

# Results

## Total Observations (6/12/17 - 9/15/17 + 10/15/2017 - 1/12/18)



# Results

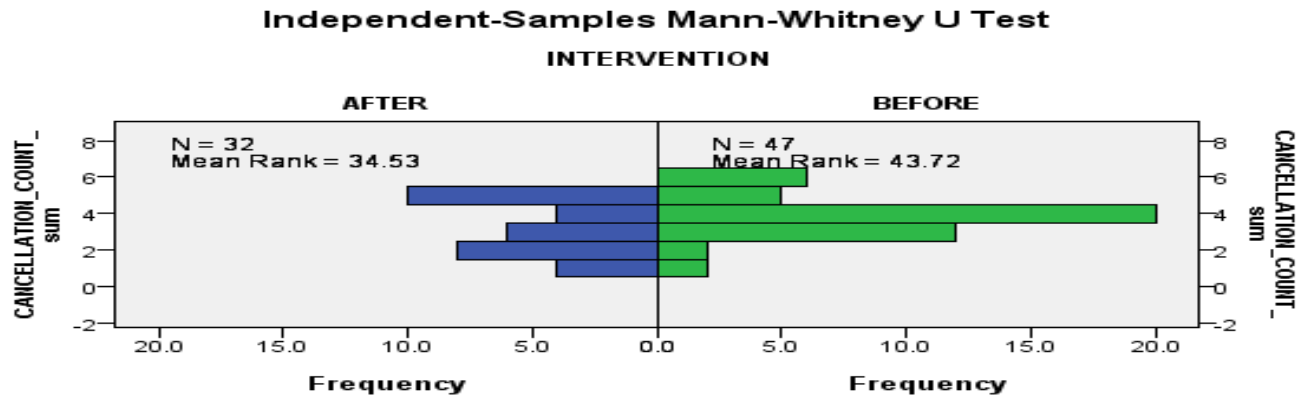
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## Chi-square test for the observations (pre-intervention and post-intervention)

Service	Scheduled (pre-intervention)	Cancelled (pre-intervention)	Total (pre-intervention)	Scheduled (post-intervention)	Cancelled (post-intervention)	Total (post-intervention)	p-value
Neurosurgery	231	7	224	88	5	83	1.192
Plastics	245	9	236	119	4	115	0.23
Urology	289	14	275	157	6	151	0.248
Dental	390	17	373	294	17	277	0.719
Total	1,115	47	1,108	658	32	626	0.623

# Results

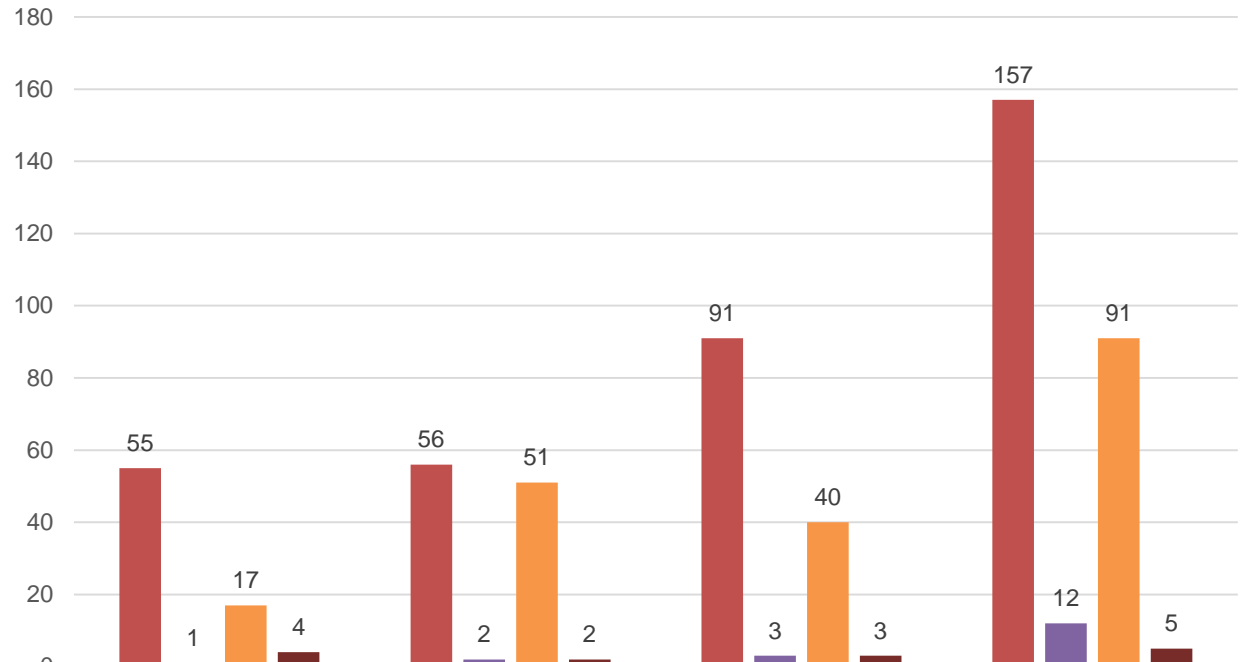
## Mann-Whitney U analysis –All observations



<b>Total N</b>	79
<b>Mann-Whitney U</b>	577.000
<b>Wilcoxon W</b>	1,105.000
<b>Test Statistic</b>	577.000
<b>Standard Error</b>	97.625
<b>Standardized Test Statistic</b>	-1.793
<b>Asymptotic Sig. (2-sided test)</b>	.073

# Results

## Intervention Implementation



	Neurosurgery	Plastics	Urology	Dental
Email sent	55	56	91	157
Cancellation in email received group	1	2	3	12
Email not offered	17	51	40	91
Cancellation in group that did not receive email	4	2	3	5

■ Email sent    
 ■ Cancellation in email received group    
 ■ Email not offered    
 ■ Cancellation in group that did not receive email

# Results

## Emailed Preoperative Instructions Implementation

Services	Email sent	Email not offered (Email not sent)	Spanish (Email not offered)	Email declined	No Email address	Preoperative staff unable to contact (families obtained times from schedulers)
Neurosurgery (N = 88)	55	8	9	10	2	4
Plastics (N = 119)	56	19	32	3	1	8
Urology (N = 157)	91	18	22	12	3	11
Dental (N = 294)	157	30	61	21	4	21
Total (N = 658)	359 (55%)	75 (11%)	124 (19%)	46 (7%)	10 (2%)	44 (7%)

# Results

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## Reasons for Case Cancellations

Reasons	Pre-Intervention (N = 47)	Post-Intervention (N = 32)
Patient Illness	23% (11)	59% (19)
NPO violation	9% (4)	22% (7)
No-show	19% (9)	6% (2)
Surgeon cancelled	13% (6)	6% (2)
Other (pending medical and financial clearance, transportation, family refused, and family did not bring asked equipment)	40% (17)	6% (2)

# Discussion

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- **Difference in the number of cases schedule pre and post intervention.**
- **Increased cancellations due to patient illness in the post-intervention phase.**

## Limitations

- **Non-experimental convenience sampling study.**
- **Single facility study.**
- **Seasonal variation.**
- **Challenges with implementing change.**

## Recommendations / Implications

- **Extend project for a longer time.**
- **Include Spanish speaking patients.**
- **Email addresses obtained by surgery schedulers.**



# Conclusion

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- **Prevalent means of communication**
- **Enhances health-care communication**
- **Retrievable reference**

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