Tulane STAR (Sending Texts, Advancing Results)
Impact of Text Messaging on Bariatric Post-Operative Protocol Compliance

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Background

- Certain components of patients' post-op care such as incentive spirometry, ambulation, & hydration are challenging to repeatedly reinforce.
- Text messaging is frequently used in the outpatient setting to communicate with patients.
- Little literature is available on the impact of text message reminders while inpatient.
- Apps and other software programs are expensive and hard to maintain.
- Tulane STAR (Sending Texts, Advancing Results) is an easy to use, text messaging reminder platform.

Objectives

- To evaluate whether Tulane STAR is an effective way to improve inpatient adherence to our institution's post-operative bariatric surgery protocol.

Methods

- We conducted a randomized clinical trial of patients undergoing minimally invasive bariatric surgery at Tulane Medical Center between February 2021 and May 2021 .
- Thirty-five patients were randomized to either education only (control) or education plus text message reminders (STAR).
- The STAR group received text message reminders to use their incentive spirometer, consume fluids, and ambulate via Google Voice on evening of POD #0 & morning of POD #1.
- All patients were then interviewed in afternoon on POD #1 to assess frequency of ambulation, incentive spirometer use, and water intake. Patients in the STAR group were able to respond to text messages with this data.

Results

	STAR	Control	p
Age			0.86
Mean ± SD	41.9 ± 11.3	42.5 ± 8.3	
Gender (n)			0.99
Male	1	0	
Female	17	17	
Race (n)			0.13
African American	13	8	
White	4	9	
Other	1	0	
BMI			0.21
Mean ± SD	45.9 ± 7.9	42.9 ± 5.7	
Surgery (Laparoscopic)			0.88
Sleeve	10	8	
Bypass	7	8	
Switch	1	1	

Table 1. Comparison of baseline demographics between STAR and Control groups.

	STAR	Control	p
# 1 oz cups			0.001
Mean ± SD	27.7 ± 3.5	18.2 ± 8.9	

Table 2. Comparison of # of 1-oz cups of water consumed between STAR and Control groups.

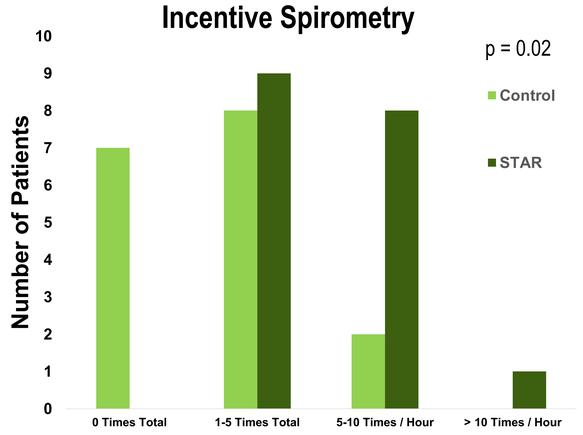


Figure 1. Comparison of postoperative incentive spirometer use between the STAR and control groups.

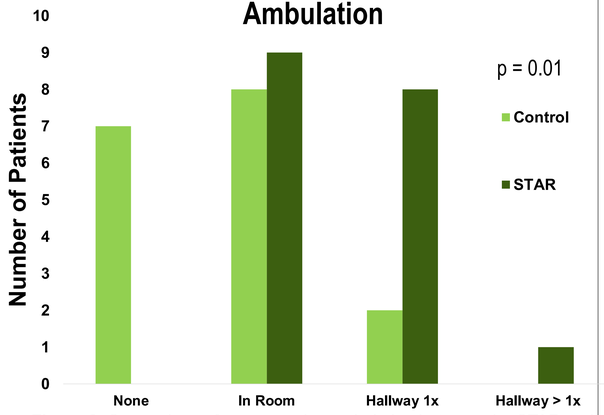


Figure 2. Comparison of postoperative ambulation between the STAR and control groups.

Conclusions

- Water consumption, incentive spirometry usage, & frequency of ambulation increased with text messaging.
- Qualitatively, patients responded very positively to text message reminders, saying they were effective reminders.
- Text messaging, in combination with standard in-person education, can enhance patient participation in their care.
- Text messages can enhance compliance to protocols.

Future Directions

- We aim to focus on clinically relevant outcomes such as length-of-stay, pain, complications, patient satisfaction.
- The patient population will expand to pre- (for elective procedures) and post- hospitalization protocols.

Contact information

- Please contact Michael Ghio (mghio@tulane.edu) with any questions or concerns.

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