Can Text Message Reminders Improve Attendance to Primary Care Appointments at a Community Health Center?

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PROBLEM

- Poor adherence to medical appointments not only negatively impacts the quality of care, but also reduces access to care for other patients.
- In 2012, the Massachusetts General Hospital Chelsea HealthCare Center (MGH Chelsea) adult medicine practice had the highest no-show rate in the hospital's primary care network.
- A previous pilot study revealed that forgetfulness and miscommunication were the most common patients' reasons to no-show to their appointments.

PROJECT AIMS

- To implement text messaging (TM) reminders.
- To evaluate their effect on appointment attendance rates at MGH Chelsea in a randomized control trial.

INTERDISCIPLINARY TEAM

- Physician, medical informaticist, patient service coordinator (PSC), medical student and physician informaticist.

PROJECT DESING/INTERVENTIONS

- We designed an informatics tool to automatically:
  - provide PSC with electronic rosters of patients who are due for a call reminder.
  - send text message reminders to patients prior to their appointments.
- MGH Chelsea is a community health center serving predominantly Latino, non-English speaking and low-income patients. All patients seen at the adult medicine practice were included in the projects and randomly assigned into one of two arms (Table 1).

Table 1 : Randomization

Control (Usual care)	Intervention
Phone call 2 days prior to the appointment	Phone call 2 days prior to the appointment + Text message 7 and 1 day prior to the appointment

CHANGES TESTED

- The no-show rate in the control group and intervention group.
- The no-show rate in intervention subgroups: consented to receive TM c/w non consented.
- Pre and post project implementation no-show rate in appointments for patients who were receiving TM c/w appointments where TM reminder were not sent or received.

RESULTS

- The study period was six months (August 2013 to January 2014).
- Among 3592 patients in the intervention group, 841 (23.4%) patients consented to receive TM, 113 (3.1%) opted out, and 2482 (73.4%) did not respond or did not have a cell phone number.
- In the intervention arm, the no-show rate was 18.0% c/w 19.8% in the control (p=0.10).
- The no-show rate in the intervention subgroup that consented to receive TM was 13.8% c/w 19.1% in the control group $p < 0.0001$ (Table 2).
- Figure 1 compares the no show rates of patients who consented to TM to those who did not, before and after the study.

Table 2. No-show rates in the control c/w intervention group, and intervention subgroups of patients that consented to TM c/w non-consented

Arm	NoShow	Arrived	%	P
Usual Care	411	1662	19.8%	
Intervention	1201	5475	18.0%	0.10
Consent	189	1182	13.8%	
No Consent	1012	4293	19.1%	<.0001

Figure 1. No-show rates pre and post project in intervention subgroup consented to TM c/w subgroup that did not receive TM

LESSONS LEARNED

- Improving attendance to primary care appointments in underserved populations is challenging.
- The text message reminders significantly improved attendance to primary care appointments in patients that agreed to receive text message reminders.
- A significant number of patients did respond to the addition of a text message reminder.
- Exploring the reasons why patients do not respond to receive messages and improving consent process to text messaging could improve the impact of the intervention.

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