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[1752349] Text Messaging to Improve Adherence To Repeat Colonoscopy In The VA: A Pilot Study

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Principal Investigator/Study Chair: Peter Liang, MD

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Abstract

Provide a summary of the study (recommended length: less than 500 words).

Colorectal cancer is a common but preventable condition, and increasing colorectal cancer screening is one of the most impactful public health contributions in the field of gastroenterology. Text messaging is a simple, cheap, and rapid method to reach patients that may improve adherence to colonoscopy appointments as well as simplify the process of bowel preparation.

The purpose of the study is to evaluate the feasibility of a pilot bidirectional text messaging intervention on attendance for screening/surveillance colonoscopy and bowel preparation quality at an urban VA hospital. The goal is to improve adherence to colonoscopy among patients who are due for a repeat colonoscopy.

The primary outcomes are process feasibility measures including recruitment rate, refusal rate for participation, and retention rate through end of study.

The secondary outcomes include documenting the proportion of patients who attended their scheduled colonoscopy appointment in the intervention group vs. the control group as well as documenting the proportion of patients with adequate bowel preparation between the two groups. We will also document the number of patients who responded to the National Annie Survey.

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Protocol Title: Text messaging to improve adherence to repeat colonoscopy in the VA: a pilot study

1.0 Study Personnel

Principal Investigator: Peter Liang, MD

Phone: 212-686-7500 x5745

Email: peter.liang@va.gov

VA Appointment: Part-time 4/8ths Medicine/GI

Research Coordinator: Anika Zaman, MPH

Phone: (646)236-3894

Email: anika.zaman@va.gov

VA Appointment: WOC

Participating Site: New York Harbor Health Care System

NYU Langone Health Appointment:

Assistant Professor

Division of Gastroenterology

Department of Population Health

423 E 23rd St 11N

New York, NY 10010

Peter.liang@nyulangone.org

(212) 686-7500 ext 5745

2.0 Introduction

Colorectal cancer (CRC) is the second leading cause of cancer death in the US. Despite overwhelming evidence that screening reduces both CRC incidence and mortality, the 2020 Behavioral Risk Factor Surveillance System estimates that only 72% of eligible adults aged 50-75 years are up-to-date with screening in the US. These figures overestimate the proportion of Americans who receive adequate long-term protection from CRC because they are based on a one-time (i.e., cross-sectional) measurement in a single year. The protective effect of screening diminishes over time; thus, national recommendations emphasize the importance of repeated testing—with fecal occult blood and immunochemical testing (FOBT/FIT) annually or colonoscopy every 10 years—to obtain the full intended benefits of a screening program.

The vast majority of patients undergoing CRC screening at the VA New York Harbor Health Care System (NYHHCS) receive colonoscopy, and a national VA study found that 38% of appointments made at colonoscopy-performing clinics following a positive FOBT were missed, cancelled, or rescheduled.2 Late cancellations and nonattendance at colonoscopy is a major source of inefficiency that wastes precious endoscopic resources, and more importantly non-adherence to screening guidelines places individuals at greater risk for developing CRC. One strategy to reduce appointment wait times and increase screening rates is to both remind patients of their upcoming colonoscopy and guide them through the bowel preparation process. Of the various interventions that have been used to improve CRC screening, text messaging is especially appealing because of its low cost, widespread use, and ability to deliver real-time information in a visible yet discreet manner. In 2012, the Community Preventive Services Task Force found strong evidence to recommend using reminders to increase FOBT screening but found insufficient evidence to do so for colonoscopy.3 Additionally, the effectiveness of newer communication methods such as text messaging was identified as a research gap. Since then, data has shown that text messaging is an acceptable method to promote CRC screening,4 and interest for health-related text messaging is high even in vulnerable populations such as homeless Veterans.5 Text messaging has been shown to increase adherence to FIT by up to 24%,6 while the only study to include colonoscopy found a modest 3% improvement.7 However, the latter was conducted in an Alaskan tribal health care system with culturally-tailored messaging, and therefore the results may not be generalizable to the broader US population.

Our prior study found that text message reminders for CRC screening is less effective than for breast or cervical cancer screening, and this is likely due to the substantial difference in patient preparation required for the respective examinations.8 Unlike screening for breast and cervical cancer or using FIT, colonoscopy involves a complex multi-day preparation process that includes dietary restrictions and drinking a large volume oral laxative on a strict schedule. Poor bowel preparation quality leads to an inadequate colonoscopic examination that must be repeated,9 which in terms of clinical outcome is equivalent to

nonattendance at colonoscopy. Therefore, assessment of attendance must also include an assessment of bowel preparation. A Korean study showed that an educational text message can improve bowel preparation quality.10 Patient navigation is another method that can provide bowel preparation education and has been proven to be effective at increasing CRC screening, but many institutions are unable to implement navigator programs due to cost.11,12 A bidirectional or two-way text messaging platform, in which patients have the ability to both receive and respond to messages, would provide a low-cost method of patient engagement that may achieve a benefit similar to conventional patient navigators. Two-way text messaging has been shown to be significantly more effective than one-way messaging for improving medication adherence.13 However, all text messaging interventions for CRC screening to date have used one-way messaging to simply encourage patients to undergo screening or remind them of their appointment. The one-way study design does not take advantage of the instantaneous and interactive nature of mobile messaging, which sets it apart from letters, telephone calls, or even emails. A bidirectional messaging platform can maximize the capability of this interactive medium by serving as both a procedure reminder and a virtual patient navigation system. Patients at NYHHCS often make last-minute cancellations because they forgot about the procedure or how to take the bowel preparation. Reminders that are sent with sufficient advance notice allow patients to cancel or reschedule and still permit another patient to use their original appointment time. In this way, it addresses a common systems-level failure to adequately notify and prepare patients for their upcoming procedure. More importantly, a series of messages closer to the procedure date can provide real-time instructions on the bowel preparation process and provide on-demand answers to frequently asked questions. Recent studies from the medication adherence literature demonstrate that real-time text messaging significantly improves adherence and can lead to a durable effect for at least two years after an intervention.14,15 Thus, bidirectional text messaging may be especially effective for increasing colonoscopy rates by reminding patients of their appointment and improving the bowel preparation quality through virtual patient navigation. This intervention would also generate short-term downstream benefits by decreasing the number of procedures performed for inadequate bowel preparation and reducing wait-times for colonoscopy. It is also possible that the intervention may lead to greater awareness of colonoscopy as a potentially life-saving procedure that must be repeated over the long-term for maximum protective effect.

Our previous qualitative work at NYHHCS examined barriers and facilitators to undergoing repeat screening or surveillance colonoscopy for Veterans who were due for the procedure. In addition to conducting 45 semi-structured interviews, we also tested messages to promote CRC screening and colonoscopy in focus groups. Based on these results, we now propose to pilot test a bidirectional text messaging intervention for colonoscopy, which combines features of a clinical reminder system with virtual patient navigation that provides additional information on demand. We will use Annie (https://mobile.va.gov/app/annie-app-

clinicians), a text messaging service designed by the VA to help patients and their providers to promote self-care and improve health management.

Only one study has examined the effect of text messaging on screening colonoscopy to date, and the results were modest but limited by lack of generalizability.7 Furthermore, this and most text messaging studies for cancer screening have not used a series of messages to prompt a complex set of actions in real-time (e.g. bowel preparation) nor allowed participants to request additional information on demand. The bidirectional text messaging platform is novel in that it will include both of these features, which mimic the characteristics of a human patient navigator. If the pilot test yields promising results that are subsequently confirmed in a larger efficacy trial, then low-cost virtual patient navigation using text messaging may become an accepted method to promote colorectal cancer screening and other preventive services.

3.0 Objectives

The objective of this study is to pilot test a text messaging intervention to improve adherence to colonoscopy among VA patients who are due for repeat screening/surveillance colonoscopy at the VA New York Harbor Health Care System (NYHHCS). The primary outcomes are process feasibility measures including recruitment rate, refusal rate for participation, and retention rate through end of study.

Hypothesis: The intervention will be feasible, and patients who receive the intervention will have higher attendance and better bowel preparation quality than those who do not.

4.0 Resources and Personnel

Principal Investigator: Peter Liang, MD

VA Appointment: Part-time 4/8ths Medicine/GI at 423 E 23rd St 11N New York, NY 10010

Roles: Will be involved in obtaining informed consent and performing data analysis. Has access to PHI. Is responsible for oversight of the study, including any adverse events.

Research Coordinator: Anika Zaman, MPH

VA Appoint: WOC at 423 E 23rd St 11N New York, NY 10010

Roles: Will be involved in obtaining PHI, recruitment process, obtaining informed consent, and performing data analysis. During recruitment

process, will screen patients, mail out invitations letters and contact patients through calls about study.

5.0 Study Procedures

5.1 Study Design

All individuals who agree to participate in the study will provide written consent and HIPAA authorization. A total of 50 consented participants will be randomized 1:1 to either the text messaging (intervention) group or the standard care (control) group. We will use block randomization with block sizes ranging from 2 to 6. The intervention group will receive a series of instructional and motivational text messages, which will be sent starting 7-14 days before and until the day of the procedure.

For instructional messages, earlier messages will remind patients of the colonoscopy appointment and later messages will help patients complete the bowel preparation process in real-time. Table 1 shows the timing and representative content of the instructional messages. Some messages may be sent over a range of days until the procedure, depending on when the participant enrolled and the type of bowel preparation (1 or 2 day) the participant is recommended to undergo. Table 2 provides a list of representative focus group tested motivational messages that will be sent along with instructional messages. The specific motivational messages will be tailored, whenever possible, based on the patient demographic traits (e.g., age, sex, and race and ethnicity).

Due to character limits in Annie, longer messages may be sent as multiple texts. Some messages will be bidirectional, and participants will be able to respond to receive additional information. Additional information will be delivered automatically based on the participant's response and does not need to be sent manually by the study team. The national Annie colonoscopy survey (Appendix) will be conducted within 7 days of the procedure date to assess patient satisfaction with the intervention.

We will use the electronic health record to measure clinical secondary outcomes, such as the proportion of patients who 1) attend the scheduled colonoscopy appointment and 2) had adequate bowel preparation.

- **Study Timelines**

We estimate that we will need 3 months to enroll all participants and an additional 1 month to complete the intervention. Analysis will be completed within 1 month. In all, the study will be completed in 5 months.

Table 1. Instructional Messages: Timing and Content

Days until procedure	Message	Reply	Follow-up message
7-14	[Tailored motivational message] Reminder: your colonoscopy is on DATE. You must have an adult escort if you wish to receive sedation. Are you planning to come for the procedure? (Y or N only)	Y	Great, we will see you on DATE for your colonoscopy! If you have any questions about the procedure, please call us: 212-686-7500 x3902
		N	You've indicated that you're not planning to attend your colonoscopy. If this is correct, please call us to cancel or reschedule: 212-686-7500 x3902
5	[Tailored motivational message] Reminder: your colonoscopy is on DATE. You must have an adult escort if you wish to receive sedation. Are you planning to come for the procedure? (Y or N only)	Y	Great, we will see you on DATE for your colonoscopy! If you have any questions about the procedure please call us: 212-686-7500 x3902
		N	You've indicated that you're not planning to attend your colonoscopy. If this is correct, please call us to cancel or reschedule: 212-686-7500 x3902
3-5	[Tailored motivational message] To prepare for your colonoscopy, STOP eating the following foods starting today: fatty/fried /greasy foods, fruits, leafy vegetables, corn, anything with seeds		
1-2 (7AM)	[Tailored motivational message] To prepare for your colonoscopy, start eating a low residue diet today. You should also start drinking the bowel prep at 5pm. Here are the instructions: <link>		
2 (5PM)*	[Tailored motivational message] It's time to start your colonoscopy bowel prep. Drink 1 liter in the next hour. The next dose is tomorrow at 8 AM. Here are the instructions: <link>		
1 (8 AM)*	[Tailored motivational message] It's time to continue the bowel prep. Drink 1 liter in the next hour. The next dose is today at 5 PM. Here are the instructions: <link>		
1 (5 PM)*	[Tailored motivational message]		

	It's time to continue the bowel prep. Drink 1 liter in the next hour. The last dose is tomorrow at 4 AM. Here are the instructions: <link>		
1 (5 PM)	[Tailored motivational message] It's time to start your colonoscopy bowel prep. Drink 1 liter in the next hour. The last dose is tomorrow at 4 AM. Here are the instructions: <link>		
0 (4AM)	[Tailored motivational message]		
	It's time for the last dose of your bowel prep. Drink 1 liter in the next hour. Here are the instructions: <link>		

*Only for participants who are receiving a 2 day bowel prep.

Table 2. Motivational messages

1	Take control of your health and make an appointment today!
2	*Colorectal cancer and colonoscopy:* "Cancers take years to develop, so the older you get, the higher probability, the better to have it done again."
3	Manhattan VA Veteran: "This thing (colorectal cancer) could kill you, and it's preventable if they catch it in time, and it just takes a few minutes…It would be stupid not to do it."
4	In 2023, more than 150,000 Americans will be diagnosed with colorectal cancer and more than 50,000 will die from this disease. Don't be a statistic. Get screened for colorectal cancer.
5	Myth: A colonoscopy takes too long, so it can wait. Fact: A colonoscopy usually takes about 30–60 minutes and can prevent colorectal cancer (the 2nd leading cause of cancer death in the US). Taking just a few hours out of your day can prevent a life with colorectal cancer.
6	Myth: I don't need a colonoscopy because I feel fine and don't have any symptoms. Fact: Colorectal cancer usually does not cause symptoms at the early stage. When symptoms occur, the cancer may already be at a late stage. Colonoscopy can both prevent colorectal cancer and catch it before symptoms appear.
7	When someone mentions colonoscopy, do you think about how much bowel prep you have to drink and feel unsure if you want the procedure? Actually, the volume of bowel prep has decreased by 50% over the years. You can also add flavoring to the solution to improve the taste. Think of bowel prep as a one-time cleaning in exchange for years of peace of mind that your colon is healthy.
8	Myth: The colonoscopy is going to hurt. Fact: It is completely okay to have reservations and concerns about the procedure. You can request sedation during the

	colonoscopy, which will make you more comfortable. If you have questions about sedation, talk to your GI doctor or nurse.
9	Myth: I'm not at risk for colorectal cancer, so I don't need a colonoscopy Fact: 1 in 23 men and 1 in 25 women will develop colorectal cancer in their lifetime. Many do not have any risk factors. But screening can prevent 60% of deaths from colorectal cancer. Don't be a statistic.
10	Myth: Colorectal cancer mainly affects men, so women don't need a colonoscopy. Fact: Colorectal cancer is the 3rd leading cause of cancer death in both men and women in the USA. 1 in 23 men and 1 in 25 women will develop colorectal cancer in their lifetime. Don't take this chance.
11	Myth: Colonoscopies are dangerous. Fact: Colonoscopies are very safe. The risk of perforation (tear) in the colon is less than 1 in 2,000 procedures. On the other hand, 1 in every 24 people will be diagnosed with colorectal cancer in their lifetime.
12	More than 52,000 people will die from colorectal cancer this year. You can prevent this. Your loved ones are counting on you. Don't be a statistic, be a survivor.
13	"I see [colonoscopies] as a small price to pay for enjoying the rest of my life" - Joyce. Read about Joyce's story: https://tinyurl.com/bdfszur3
14	"The colonoscopy saved my life" -Joanne. Read about Joanne's story: https://tinyurl.com/bdfszur3 Colorectal cancer is the 2nd leading cause of cancer death in the US. 1 in 23 men and 1 in 25 women will develop colorectal cancer in their lifetime. Don't be a statistic, be a survivor. Schedule a colonoscopy today and join Joanne and many others in a life without colorectal cancer.
15	Did you know that colorectal cancer is the 3rd-leading cause of cancer death in both men and women in the United States? Colorectal cancer can be caught early or even prevented through regular screening. Most people should begin screening at age 45.
16	Colorectal cancer is often a silent disease. Usually there are no symptoms. That's why getting screened is so important. Screening can help prevent colorectal cancer or catch it early when it is easiest to treat. Most people should begin screening at age 45.
17	Right now, you could have a polyp, a small growth in your colon or rectum. Right now, your polyp may be harmless, but over time it could develop into colorectal cancer. Right now, through regular screening, you have the power to find and remove precancerous polyps and prevent colorectal cancer. Call your doctor and take control of your health!

18	If you are 45 or older, you're at a higher risk for colon cancer—even if you are healthy. Ask your doctor for a screening test.
19	Colon cancer starts with a polyp in the large intestine. Polyps are very common in people age 45 and older, but they can be detected and removed before they turn into cancer. Don't die of cancer. Talk to your doctor about colon cancer prevention.
20	You are so important to your family, don't let them down! Don't procrastinate any longer! Get screened for colon cancer today! It could save your life.
21	Colon cancer is the 2nd leading cancer killer in the U.S., but it doesn't have to be. Colon cancer can be prevented or found at an early stage. Getting screened is absolutely necessary! Call a doctor today.
22	Screening can prevent colorectal cancer.
23	"There will be some preparation, but the benefit of it is tremendous. This is a cancer that can be prevented, can be stopped…and things can be literally sort of nipped in the bud" - Manhattan VA Veteran
24	If you have concerns about having a colonoscopy, please feel free to reach out to the gastroenterology (GI) division. Our GI doctors and nurses will be happy to answer your questions.
25	"[Colonoscopy] is a maintenance check. That's all it is. It could save you a lot of pain and agony. I'm sure [cancer] is not a pleasant experience, and it could be deadly, so why not kick its ass?" -Manhattan VA Veteran
26	"I know this is something that I have to do for my health." - Manhattan VA Veterans on screening

5.2 Recruitment Methods

Patients undergoing repeat screening or surveillance colonoscopy at the VA NYHHCS are eligible. We plan to oversample female patients so that at least 20% of participants (10 individuals) are women. Participants will be recruited from a list of patients scheduled for colonoscopy. Research team members will screen and identify eligible participants using the VA electronic medical records system (CRPS). Participants will be either recruited during their in-person pre-colonoscopy clinic visit or through mailed invitations followed by up to 3 follow up phone calls. This will be conducted by the research coordinator. A research team member will explain the study to each potential participant and obtain written consent and HIPAA authorization from the participant in a private room to maintain patient privacy. For participants randomized to the intervention arm, a clinician member of the research team will obtain verbal consent from the patient to enroll in Annie, in accordance with requirements for who can consent when using Annie (https://mobile.va.gov/sites/default/files/annie-app-clinicians-quick-start-guide-1-3.pdf). Only individuals deemed to have capacity are eligible for study participation. No vulnerable populations will be included.

Participants will be responsible for the costs of the text messages they may receive as part of the intervention. Each participant will receive $40 in the form of a gift card or check to compensate for their time. There are no additional costs to the participant.

5.3 Informed Consent Procedures

All patients will be required to provide written consent to participate in the study. This will be obtained by a member of the research team. A blank copy of the informed consent form will also be provided to participants for their records at the time they sign the consent. All study personnel will have had up-to-date TMS and CITI trainings on how to obtain and document informed consent as well as regarding human subjects' protection requirements.

Informed consent is a process that is initiated prior to the individual's agreeing to participate in the study and continues throughout the individual's study participation. Extensive discussion of risks and possible benefits of participation will be provided to the participants and their families. Consent forms will be IRB approved. The investigator will explain the research study to the participant and answer any questions that may arise. All participants will receive a verbal explanation in terms suited to their comprehension of the purposes, procedures, and potential risks of the study and of their rights as research participants. Participants will have the opportunity to ask questions prior to signing the consent form. The participants will have the opportunity to discuss the study or think about it prior to agreeing to participate. The participants may withdraw consent at any time throughout the course of the study. The rights and welfare of the participants will be protected by emphasizing to them that the quality of their medical care will not be adversely affected if they decline to participate in this study.

Signed consent will be documented in the subject's research record. The consent process, including the name of the individual obtaining consent, will be thoroughly documented in the subject's research record.

5.4 Inclusion/Exclusion Criteria

Inclusion criteria:

-Age 45-85 years

-Has previously undergone a colonoscopy and is currently due for a repeat screening or surveillance colonoscopy at the VA.

Exclusion criteria:

-Patients not due for screening or surveillance colonoscopy. This will be based on 2020 guidelines from the US Multi-Society Task Force on Colorectal Cancer.

-Patients with personal history of CRC/inflammatory bowel disease/ hereditary colon cancer syndrome or family history of hereditary colon cancer syndrome. These criteria will be determined based on ICD9/10 codes or the medical record.

5.5 Study Evaluations

The national Annie colonoscopy survey (Appendix) will be conducted within 7 days of the procedure date to assess patient satisfaction with the intervention. The survey will be sent by the research team via Annie text messages and should take approximately 2 minutes to complete. While the national Annie colonoscopy survey is also used by other VA facilities, the results from this study will not be shared.

We will use the electronic health record to measure clinical secondary outcomes, such as the proportion of patients who 1) attend the scheduled colonoscopy appointment and 2) had adequate bowel preparation. We will extract the following data: Names, MRN, date of birth, sex, race and ethnicity, telephone number, mailing address, date of colonoscopy, Boston Bowel Prep Scale score, and colonoscopy findings.

5.6 Data Analysis

Data Analysis

The primary feasibility will be evaluated with descriptive statistics. For the secondary efficacy outcomes, we will use the chi-squared or Fisher's exact test to compare proportions in the two groups.

Power calculations

This pilot feasibility study will generate data that can be used to conduct a subsequent larger efficacy trial. Power calculations were not performed for the primary outcome. For the secondary outcome of colonoscopy attendance, based on the current 70% attendance at the study site, we will have 80% power to detect a 22% absolute increase in attendance in the intervention group, assuming a type I error of 10%.

5.7 Withdrawal of Subjects

Participants may withdraw from the study at any time. For participants who withdraw, any data collected up to the time of withdrawal may still be retained and analyzed. Those who are randomized to the intervention arm can stop receiving messages at any point by texting “Stop” to Annie. There will be no adverse consequence for a participant who decides to withdraw from the study.

6.0 Reporting

All unanticipated problems, serious adverse events, and protocol deviations will be reported to the IRB. The PI is responsible for oversight of reporting any adverse events. In the event on an adverse event that is related to text messaging, messages will be stopped immediately on the Annie application if the participant is unsure how to text back, “Stop.” Any other adverse events will be addressed directly with patients and dealt with accordingly.

The PI will be responsible for data monitoring. The PI will design the data collection instruments such that variable coding and data format are consistent. The PI will review all data collected on an ongoing basis (each month during the duration of the study) for data completeness and accuracy as well as protocol compliance. The PI will maintain exclusive control over individual permissions to access the research data.

7.0 Privacy and Confidentiality

The data will be accessed, analyzed, and stored on the secure VA network. Data will be password protected and stored in a secure folder on the VA Network. Hardcopy consent and HIPAA authorization forms will stored in a locked cabinet inside the PI’s locked office. Names, MRN numbers, phone numbers, and addresses will be collected. This information is needed to mail invitation letters, make phone calls, and track patients in CPRS. Dates will also be accessed in order to measure clinical secondary outcomes, such as the proportion of patients who attended the scheduled colonoscopy appointment. Only individuals with IRB approval and listed in the protocol will have access to the data. All personnel who work on this project will complete the necessary CITI and TMS training for research involving patient data. Once all the data has been cleaned for analysis, any identifying patient information will be removed to further ensure confidentiality. Data from this project may be published in aggregate, anonymous form. The study will be closed once all planned publications are completed. Upon completion of this project, the data will be stored for at least the minimum amount of time as stipulated by the IRB. There is no plan to destroy collected data. No biospecimens are being collected for this study.

8.0 Communication Plan

All information regarding changes to the study will be kept up-to-date on IRBNet. In the rare chance of an Adverse Event, Unanticipated problems, or interim results, it will be reported to the VA IRB. All team members will have full knowledge of the IRB approved protocol and follow accordingly. All changes regarding protocol, informed consent, and HIPAA authorization will also be reported to the VA New York Harbor IRB via IRBNet. There are no other VA facilities involved.

9.0 Risks to Subjects

The intervention being studied is a series of text messages. There is minimal risk, discomfort, or inconvenience to the participants. There is a small risk that the messages may be considered too numerous or intrusive. Participants will be reminded that they can stop participating in the research at any time and unenroll in Annie. There is also a small risk of breach of confidentiality, and all necessary precautions will be taken to prevent this. To ensure the that there is no breach in confidentiality, all patient information will be kept in password protected devices and encrypted folders at the VA.

In this study, participant will receive texting over mobile/cell phones and this method of communication may result in a breach of confidential information because text messages to mobile/cell phones are not encrypted. This means that information participants send or receive by text message could be intercepted or viewed by an unintended recipient, or by the mobile/cell phone provider or carrier.

10.0 Potential Benefits to Subjects

For participants who were planning to cancel their colonoscopy or did not know how to do the bowel prep, the text messaging intervention may help them to prepare for and attend the procedure. Obtaining a colonoscopy has been proven to lower the risk of colorectal cancer, which is a potential benefit to participants. If the intervention is shown to be effective, then it may be adopted at other institutions and increase colonoscopy uptake in the general population. It would also contribute to generalizable knowledge by showing that text messages can improve colonoscopy attendance and bowel preparation quality.

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Appendix

A. National Annie colonoscopy survey

1. Was the VA able to perform your colonoscopy procedure?
Yes
No

2. Getting setup by my clinician to use Annie was easy.
1. Strongly disagree

2. Disagree
3. Neutral
4. Agree
5. Strongly agree

3. The instructions I received from Annie related to my preparation were easy to understand.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

4. Annie's messages helped me to complete my preparation better.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

5. Without Annie's messages, I would have contacted my VA care team more.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

6. I felt more connected to VA because of Annie's messages.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

7. The number of messages I received from Annie related to my preparation was just right.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

8. I am satisfied with the service I received from Annie.
1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

9. How can we improve your experience with Annie?
Write in response