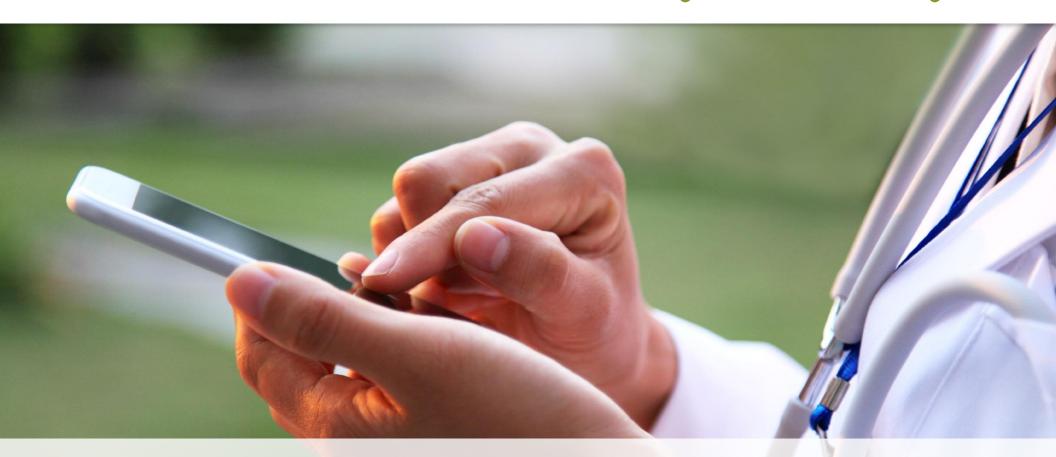# Text Messaging in the Healthcare Safety Net

The Center for Care Innovations' Texting for Better Care Program

INFORMING
CHANGE

Table of Contents

Introduction

The Texting for Better Care Program

As healthcare reform heralds the arrival of more newly insured patients into the system, providers throughout California's healthcare safety net are interested in exploring how new technologies and innovative approaches can help them meet this increased demand. As mobile phone use has rapidly increased, texting has emerged as a promising tool for managing and improving patient care. The Center for Care Innovations (CCI) noticed widespread interest in developing the capacity for texting interventions when they hosted one of their Safety Net Innovation Network meetings in the Spring of 2013.

Subsequently, CCI partnered with the Blue Shield of California Foundation to develop the Texting for Better Care Program (the Program). They requested proposals for texting projects, reviewed the submissions and then showcased the projects on their website so healthcare organizations could provide input by voting on which projects CCI should fund. Eight organizations were ultimately selected to develop and pilot texting projects over the course of the year. As part of the Program, they received:

- Grants of $30,000,

- Peer learning and information exchange opportunities (e.g., webinars, conference calls),

- Assistance with setting project outcome measures and other data-related issues, and

- Tools and resources shared through an online system.

The Evaluation

In January 2014, CCI engaged Informing Change to conduct an evaluation of the Program. Informing Change provided technical assistance support to grantees, examined the outcomes of the texting interventions, and captured relevant lessons from the pilot projects to benefit the healthcare safety net field. Informing Change conducted the following data collection activities during the course of the evaluation:

- Reviewed quarterly grant reports from the grantees and provided interim progress updates to CCI at three points throughout the year;

- Led periodic check-in calls with grantees to flesh out the information included in quarterly reports and to solicit areas in which they required technical assistance or support;

- Reviewed and collected relevant materials and tools created by grantees during the course of their projects (e.g., consent forms, staff training guides, staff workflow, message content);

- Conducted end-of-program phone interviews with each grantee to delve more deeply into the impacts and lessons learned from the Program experience; and

- Interviewed three technology vendors who provided platforms that grantees used to implement their texting programs.

The Projects

Grantee Project Overview

Organization	Location	Project Goal	Texting System	Launch Date
Asian Health Services	Oakland	To provide youth access to health insurance information and enrollment assistance	Ellipsis Health	November 2014
Golden Valley Health Centers	Central Valley	To reduce "no-show" appointment rate by supplementing a phone reminder system with texting reminders	Twilio Communications	June 2014
Los Angeles County Department of Health Services	Los Angeles	To improve the transition of care between inpatient or emergency department settings and outpatient services	Ellipsis Health	Did not launch
Northeast Valley Health Corporation	San Fernando	To reduce the rate of broken appointments through texting reminders To help patients with high blood pressure and hypertension self-manage their blood pressure levels*	Teletask	August 2014 February 2015
Petaluma Health Center	Petaluma	To better manage the patient specialty care referral process by closing open referral appointments	eClinicalWorks	May 2014
Riverside County Health System	Riverside	To help diabetic patients achieve their self-management health goals	Ellipsis Health	July 2014
Sacramento Native American Health Center	Sacramento	To further engage patients enrolled in a substance abuse recovering program	Health Crowd	June 2014
San Francisco Department of Public Health	San Francisco	To decrease "no-show" appointment rate by texting reminders of upcoming appointments	eClinicalWorks	May 2014

* Northeast Valley Health Corporation launched two text message projects over the past year; while CCI funding supported the blood pressure management project, this deck includes information and learnings from both projects.

Projects' Vendors & Platforms

Grantees used a range of vendor solutions for their text messaging systems. The systems ranged from vendor-hosted platforms to "off-the-shelf" solutions to services available through current electronic health record (E.H.R.) systems.

- **Vendor-hosted solution** – In general, these solutions offer more assistance with design and set-up, customize interfaces based on staff needs and can program message logic. However, they require internal IT support to integrate with other systems and data are not stored on site.

- **"Off-the-shelf" platforms** – These applications are available to purchase and require programming by organizations. These platforms tend to be cheaper over the longer-term and the data is stored in-house. However, they require substantially more internal IT support to design and support the system.

- **Electronic health record platforms** – Some E.H.R. vendors currently offer (or are planning to offer) text messaging services as part of their platform. These messaging functions are already integrated into the E.H.R. system, so message logs can be stored easily in medical records. However, they may have more limited functionality or customizability than other platforms.

Experience with Texting Prior to Program

Most grantees had no experience with texting in their organizations when they began the Program.

- Four grantees report that they had no prior experience with texting prior to the CCI grant; they note they are "starting from scratch" or have had "no real experience with non-face-to-face communication."

- Two grantees—Golden Valley Health Centers and Riverside County Health System—had begun talking and planning with their vendors about their texting projects; this meant they were in a good position to move forward with additional planning and implementation with CCI's grant support.

- Two grantees had some prior texting experience before the CCI grant: Asian Health Services staff would send text messages ad hoc to youth patients on an office cell phone to remind them of upcoming appointments; Sacramento Native American Health Center had an appointment reminder texting project running in their dental department.

"Basically we are starting from the basics here.... A lot of our patients have cellphones, so we thought this could be a way to communicate with them that would fit into their daily lives."

– Grantee

Purposes of the Projects

The eight grantees decided to use text messaging for one of three primary purposes, including:

- **Reminding patients about upcoming appointment or insurance deadlines** (i.e., Asian Health Services, Golden Valley Health Centers, San Francisco Department of Public Health and Northeast Valley Health Corporation*)

- **Encouraging patients' self-management of their health** (i.e., Northeast Valley Health Corporation, Riverside County Health System and Sacramento Native American Health Center)

- **Promoting better transitions of care** (i.e., Petaluma Health Center, Los Angeles County Department of Health Services)

See the "CCI Texting for Better Care Project Profiles" on pages 31–42 for additional information about each of the grantees' project implementation, results and learnings.

This is [SITE] - Your appointment is on [DATE], [TIME]. The address is [ADDRESS]. Please reply 1 to Confirm, 2 to Cancel.
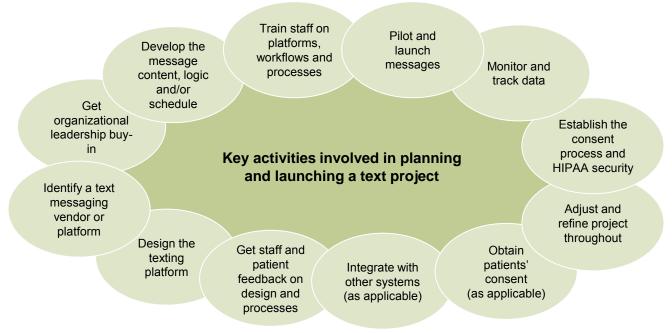
Change starts from within. Are you ready and willing to make some changes in your life today? Text CHANGE if you are willing today.

[Clinic] is notifying you that your referral is ready. Contact specialist at [phone number] to make an appointment. Call our hotline at [phone number] with questions or assistance.

* This includes Northeast Valley Health Corporation's second project.

The Planning & Launching Process

Recognizing that the Program sparked most grantees' foray into texting, the planning and start-up process took longer than grantees expected. On average it took approximately six months for grantees to begin sending their text messages.* Grantees reported delays in their original timeline due to a variety of challenges (page 12); however, all grantees but one eventually launched their text messages.

Develop the message content, logic and/or schedule

Train staff on platforms, workflows and processes

Pilot and launch messages

Monitor and track data

Get organizational leadership buy-in

Key activities involved in planning and launching a text project

Establish the consent process and HIPAA security

Identify a text messaging vendor or platform

Adjust and refine project throughout

Design the texting platform

Get staff and patient feedback on design and processes

Integrate with other systems (as applicable)

Obtain patients' consent (as applicable)

* This is calculated based on the Program's start date (January 2014) to the month when grantees' launched text messages. It includes nine texting projects (including two of Northeast Valley Health Corporation's projects) and ranges from 4 months to 13 months. This average does not account for any planning that took place prior to the Program.

Initial Project Outcomes

To varying extents, grantees are seeing positive outcomes from their texting projects.
Given the substantial delays and pilot nature of the projects, grantees were able to track outcomes at different levels. They report the following as initial key outcomes of the texting project:*

- **Improving the patient experience** – Grantees note that patients are reacting positively to the option to choose texting as a mode of communication and think that it can be easier to communicate with the health center. Some patients are requesting that texting be expanded for other purposes or at more sites.

- **Increasing access to appointments and care** – With most appointment reminder projects, the overall goal was to decrease the health centers' "no-show" rate. While this rate did not dramatically decrease, staff realized an unexpected benefit—the ability to prompt appointment cancellations through texting allowed them to more effectively fill appointment slots.

- **Streamlining staff workflows and saving time** – During the initial phases of the project, grantees note that it often took more staff time than anticipated to ensure that phone numbers were valid and to gain patients' consent. However, there were resulting efficiencies (e.g., saving time sending text messages versus calling patients). A couple grantees note that the texting project prompted them to re-assess and refine their overall workflow beyond the texting component.

* For more detailed information on project-specific data and outcomes, see project profiles on pages 31–42 .

Initial Project Outcomes

- **Developing new systems and platforms** – Grantees note that their text message platforms are useful to log and track patient communication, care transitions and appointments. One grantee is getting rid of their old phone reminder system and using the texting platform for both audio and text reminders; another grantee has developed a care transition patient tracking tool that they think has the potential to spread to other health centers.

- **Enhancing organizational capacity to engage in new technology projects, especially texting** – As a result of their Program experience, grantees learned a lot about what it takes to introduce new or innovative projects. In addition, they also have established processes, protocols and tools (e.g., consent processes, workflow guidelines) to further the reach of texting moving forward.

Five of the nine grantee projects are currently being sustained at the organizations after the Program. For the other three projects, grantees are unsure if they will be sustained, unless they find additional funding, have staff capacity to manage the project or have more time to test the project. Many of the grantees also see the potential to expand texting to other purposes or sites at their organization.

"We had originally intended to use the texting platform only for patients participating in the texting program, but we have decided to add other non-participating patients because the platform serves as a good data repository and vehicle for tracking all patients who receive health coaching."

– Grantee

Key Challenges

Grantees reported numerous challenges while planning, implementing and reporting on their projects, which often delayed the launch of the text messages. Key challenges included:

- Identifying appropriate vendors or platforms

- Dealing with project staff transitions

- Attempting to align texting project with organizational priorities, overcoming bureaucracy or getting buy-in from leadership

- Troubleshooting errors or delays within texting systems or cellular connections

- Resolving "bad phone numbers," which result in undeliverable text messages

- Not having expected functionalities within texting systems (e.g., bi-directional texting capabilities, real-time data tracking)

- Working with organizational leadership to establish consent procedures then obtaining consent from patients

- Getting the expected number of patients to sign up or engage with two-way texting

- Dealing with patients who were confused about the texts they received (e.g., who was texting them, purpose of the text)

"The original goal of enrolling 80–100 patients proved to be overly ambitious for our pool of eligible patients."

– Grantee

"We have been stalled by our current vendor due to a software problem that automatically signed up all our patients for texting."

– Grantee

Project Learnings

Learnings Overview

The past year has been an intensive time of piloting, adjusting and learning for the eight grantees. Based on both the successes and challenges experienced while planning and implementing their projects, key lessons learned were identified in the following nine areas:

Creating Teams to Guide Projects

Protecting Health Information

Getting Buy-in from Leadership & Staff

Obtaining Consent from Patients

Engaging Patients

Selecting Vendors & Establishing Platforms

Tracking Data & Creating Reports

Integrating Texting with Other Systems

Developing the Message Content

Creating Teams to Guide Projects

In the initial project stages, form a workgroup that meets on a regular basis to keep up the momentum of the project. The group may meet less frequently over time as processes become established and integrated into the organization. If working closely with a vendor to set-up the texting platform, establish regular meetings to check-in about design issues and troubleshoot challenges.

Obtain input and buy-in from staff whose roles in the organization are key to project success. While the level of input will vary for each role, consider including the following staff for project guidance, approvals or implementation assistance on specific questions:

- **IT staff** – How can texting best fit into the existing internal technology systems? Does a separate platform need to be developed? How can the organization integrate systems to ensure that data flows in and out of systems (e.g., E.H.R., scheduling systems) appropriately? What type of coding is needed to achieve systems integration? What is important to look for when selecting an external vendor or system? How can data be extracted to measure outcomes?

- **Project manager** – When and how should different team members provide input? What is the timeline and how can the project move forward when we encounter challenges? What is the plan to document the process (e.g., to ensure continuity if staff transition)?

"I think it's really important to have all the players at the table. Sometimes we were short-sighted with who was involved on our team."

– Grantee

Creating Teams to Guide Projects

- **Organizational Leaders** – Does this texting project align with the organization's overall technology, communication and patient engagement strategies? Are there any key concerns about using texting to communicate with patients? What is the organization's interpretation of HIPAA as it relates to texting?

- **Clinical Providers or Health Educators** – Do the text messages make sense? Does the purpose of the text project align with the departments' goals? What communication do the patients need and what is the best method? How can texting potentially help streamline work processes?

- **Site Managers or Frontline staff** – How can the process of texting enhance day-to-day work? What is or is not working with texting at different sites? How can the process improve or problems be addressed?

- **Legal or Compliance staff** – What is the organization's current policy around texting? If there is not a policy, what is allowed or not allowed? What type of consent is needed from patients (e.g., signed, verbal, texted)? What type of information, language and terminology should be restricted from texts? How should staff handle issues if the patients text back protected health information?

- **Quality Improvement or Finance staff** – How can texting be sustained over the long-term within the organization? How can texting fit into broader quality improvement plans? How can texting reduce costs and save money?

Getting Buy-in from Leadership & Staff

Work on getting buy-in early on from multiple levels—both from leadership and the staff who will be involved in the texting process. Determine areas where texting can fit into broader organizational efforts, priorities (e.g., moving to patient-centered medical homes, integrating communication systems) and regulations (e.g., understanding security needed, getting approval on messaging), so that texting projects are positioned for sustainability or expansion.

> *"One piece of advice might be to start [getting buy-in] as high as you can go because eventually something filters up and it's better to know [about issues and concerns] earlier than later."*
>
> – Grantee

Understand the experience of staff who will be using the texting system. Before launching the texting system, understand the current process that staff use to reach project goals (e.g., resolve open referrals, remind patients of upcoming appointments, encourage patients to monitor blood pressure levels). Ask for staff's input on the ideal design of texting or how it could more effectively assist their current work. Consider conducting interviews, surveys or group conversations to get this initial feedback.

> *"Staff members are more likely to follow a workflow that they have provided input into rather than it being given to them by others."*
>
> – Grantee

Getting Buy-in from Leadership & Staff

Present the texting project as a pilot, iterative process. To prepare and engage staff in the project, acknowledge the likelihood of hiccups during the project process and remind them that innovation requires a cycle of design, use, feedback and re-design. Invite regular feedback (see box) to solicit design input and to mitigate frustration about the project and related workflow changes.

POTENTIAL SPACES FOR FEEDBACK

- Staff "huddles"
- Email feedback
- Periodic presentations and conversation about the project progress
- Texting project team meetings
- Staff-user advisory group

"One of the weaknesses of our text taskforce was that we didn't have a clinical person on that committee…. I think we need to have them involved, so we can ask: 'Are these just pie in the sky ideas?' 'Do these messages make sense?'"

– Grantee

Incentivize and celebrate staff members involved in the pilot texting projects. Consider offering friendly competitions or having volunteers assist with the work, especially when more laborious activities need to occur (e.g., cleaning phone number data fields, requesting that patients sign consent forms). Also, introducing the project as an opportunity to improve processes can help staff feel excited and empowered to make change.

Engaging Patients

Ask for feedback and input from patients. Understand the patients' perspective to better learn if they have interest or capabilities to text (e.g., do not know how to text, do not have a cell phone, like to talk to staff), as well as how they may respond and engage with messages (e.g., content, ideal length or frequency of texts). Consider holding focus groups, conducting surveys or working with patient advisory committees to gather this input.

Consider walking patients through the texting process. When implementing a more intensive texting project with patients (e.g., periodic messages about self-management goals), consider having a staff member clearly describe the texting process in-person to help clarify the purpose and type of interaction that patients will receive; consent forms are not always sufficient to relay information.

Recognize that certain population groups may not have the interest or capabilities to use text message services. Some of these population groups tend to be older patients who are not as comfortable using texts to convey information, and complex care patients who may need more verbal or in-person instructions to ensure high quality care.

"Unfortunately texting hasn't played a big role improving our high-risk patients' care coordination. Phone calls are a very effective intervention for this population."

– Grantee

Tracking Data & Creating Reports

Structure the texting platform to capture key project data. Proactively think through how the data should be examined (e.g., groups of patients, system users, sites) during the project planning phase so that it can be designed into the system proactively. When working with a vendor, ask about their ability to design the platform to provide real-time data.

"We didn't have any difficulty with accessing the data because we have a programmer on staff.... For others, I'd recommend talking with your vendor to make sure you're getting the reports out that you want, or ask somebody on staff who can do that for you."

– Grantee

Run reports periodically to check for problems or errors that need to be addressed.
Monitoring the texting data can help identify problems, such as technical errors or staff tracking or entering data using different definitions or measurements. Having a process to monitor the data can also help ensure that patients' responses are reviewed and addressed as needed.

"The task of checking the text message logs daily was not assigned to any one person but rather reviewed as a summary on a weekly basis. We found that this was not an effective way to prevent technical errors. To address this problem, we learned that there needs to be an individual responsible for monitoring these text message logs on a daily basis."

– Grantee

Tracking Data & Creating Reports

Develop clear definitions of patient groups and measurements from the beginning of the project. When thinking through the project's design, think about the definition of patients to include in the project, including how engagement is defined (e.g., active versus inactive patients). If a patient group changes during the project or the project expands, make sure that implications for measurement are adjusted as needed.

"We've had many conversations about how to define 'active patients.' Our staff and vendor have eight different ideas of how that should be defined."

– Grantee

"We have an analytics tab in our platform where staff can click to understand how many messages have been sent, what types of goals have been set and how many patients are active. Staff can view and analyze this data through the platform, but we are also adding a feature soon where staff can download an Excel document of patient data."

– Vendor

Developing the Message Content

Keep messages clear and concise. Text messages are limited to 160 characters, including spaces, so design messages that are short and to the point. However, avoid too much shorthand (acronyms, shortened names), which can potentially confuse the patient about who is sending the text or why.

"We are very parsimonious about what we ask for in the text message."

– Grantee

Allow time to test messages, obtain feedback and refine them. Gather input from both staff and patients and pay attention to the wording, sequencing and timing of messages to effectively reach patients.

"You have to go into the project knowing that Plan A is going to change. Even though we included [staff input] at the start, we had to start sending the text messages to really know what information we should include or exclude."

– Grantee

Ensure that text messages are culturally appropriate for the patient population. Translating messages into common languages spoken by patient populations helps to extend the reach of messages; make sure to engage native speakers in the translations. Also be aware that translations may require more characters, so an exact word-for-word translation may not be possible with the 160 character limit.

Developing the Message Content

Provide an introductory message, and in some cases, a closing message. Consider offering an introductory text message to patients before starting the project; remind them who is sending the messages, for what purpose and the fact that they can opt out of the messages (see page 27). If the texting campaign is planned for a sustained period of time, send a closing message when it is done to link patients to the organization's website or ask for final feedback on the process.

"We learned that it would have been helpful, if we had sent out one final message to thank participants and to direct them to more information."

– Grantee

Determine the frequency with which texts should be sent based on the structure of the project and patients' feedback. For example, in an appointment reminder texting project, one or two texts should be sufficient; whereas, in a self-management goal coaching project, it is appropriate to send more frequent texts. Look to the patients to provide input on the specific frequency with which they wish to receive text messages.

Developing the Message Content

Test sending messages at different dates or times to assess when patients will be most engaged. For example, send some messages in the morning and others in the evening to see if time of day affects patients' response to the texts. When texting appointment reminders, send texts at different intervals prior to the appointment (e.g., one versus two-days before) to see what works best.

"We tested different times to send the text reminder out. Initially we sent out the messages two days before the appointment anticipating that there would be enough time for the patient to call and reschedule. Then the team decided to test a one-day reminder, thinking that people are less likely to forget their appointment if the reminder was sent the day before."

– Grantee

Protecting Health Information

Craft messages that are generic and can apply to any patient. Conduct research on HIPAA's application to texting and determine the organization's interpretation to the laws. Some strategies to avoid potentially sensitive or protected health information include:*

- Avoid using names or specific types of appointment, referrals, medications or tests.

- Train staff on how to deal with protected health information being sent back by the patient (e.g., staff trained to respond via phone, not by text).

- Require that patients opt-in to texting versus opt-out of texting.

- Have all messages and consenting processes approved by the organizations' legal, privacy or compliance department.

- Restrict the number of staff who have access to the texting platform.

- Block all potentially sensitive services (e.g., HIV clinic, psychiatry) from receiving text appointment reminders or use nicknames so specific services are not evident.

"There were concerns over adding the message 'Please bring your medication bottles' as this suggests that the patient is taking medications."

– Grantee

* These are a list of strategies that grantees referred to in their text messaging projects; CCI or Informing Change do not recommend any specific strategy.

Obtaining Consent from Patients

When launching texting as a communication option within the clinic, plan for adequate time to sign up patients for texting. Offering staff competitions, engaging volunteers or offering a patient computer kiosk in waiting rooms are all potential strategies to prompt patient sign ups. Once a critical mass of patients have given consent, work to streamline the process into the organization's regular operations.

"The front desk have 20 different things to ask a patient when they come up to their desk, so we held a competition to get them to put texting on the forefront."

– Grantee

Discuss technological limitations with IT staff or vendors to understand how systems can enable and disable patients for texting. For example, if your organization wants to have multiple types of text messages (e.g., appointment reminders, self-management goal encouragement, health announcements), understand the system's capabilities to opt patients out of one type of message but not all messages. Some systems may only be able to opt patients out of text messages across the board.

"Right now, when a patient texts back to say 'stop,' the system will immediately stop the text messages for them across all types of text messages."

– Grantee

Obtaining Consent from Patients

Get a clear understanding of the organization's privacy and consenting processes. Request input or invite compliance/privacy officers to project meetings from the start to ensure that the design of the consent process meets the privacy standards of the clinic and patients. At this point, health centers have a wide interpretation of HIPAA and privacy laws, so it important to understand where each health center falls on the spectrum.

"The team has been looking to integrate the texting consent process with an already existing process to streamline the work required from the front office staff during patients' registration."

– Grantee

Examine the different options for obtaining patients' consent for texting (see below).
Consider integrating texting as a communication option on existing patient forms that are completed during the registration process. When adjusting the form's language, consider including other electronic communication options to expand tools for patient communication (e.g., email, patient portal, texting). Integrating texting consent processes into existing processes can help reach more patients and streamline the staff's workflow; whereas obtaining in-person consent forms for each texting project can be very time intensive.

Spectrum of Consent Processes

Signed consent through texting project-specific forms	Signed consent through registration forms (e.g., communication options)	Signed consent through registration forms and a positive reply to an initial text message	Verbal consent obtained through a phone call	Consent implied through the option for patients to opt-out of text messages

Selecting Vendors & Establishing Platforms

Consider the pros and cons of various texting vendor and platform options. Conduct thorough research to select a vendor or platform that works best with your organization's current needs and future plans for texting. Consider the following:

- Options for bi-directional or one-directional texting

- Ability to integrate with other systems at the organization

- Level of external support and assistance provided

- Level of internal IT support needed

- Short-term and long-term costs (e.g., set-up fees, per message fees)

- Security and potential data breach risks

- Platform options for sending messages with logic or on specific schedules

- Options for monitoring texts and analyzing texting data

- Ability to customize platforms and data reporting

Selecting Vendors & Establishing Platforms

Ensure that the platform is set up to receive and track patient responses, as needed. If the project is designed to be a bi-directional texting project, ensure that the chosen platform not only has these capabilities, but that it is able to effectively link patients' responses to the messages that were sent. If the organization is considering using texting for more than one purpose on the same platform, discuss with the IT department or vendor how these responses can be tracked and monitored separately.

"Every organization needs to keep in mind that there's a learning curve in place and they may expect the platform to work in a certain way or for it to have certain features that may not be possible right away."

– Vendor

Integrating Texting with Other Systems

Discuss with leaders the organization's technology plans for the future. Organizations may be planning to shift their E.H.R., scheduling systems or practice management software. Before spending time and effort to write codes between systems, ensure that current systems will be used in the foreseeable future.

Allocate time for an internal IT staff member to assist with the systems integration process. If texting functions will not be used within an existing E.H.R., plan to involve internal IT staff in discussions and processes to integrate systems so that data can be stored and used most effectively. Vendors often do not have specific knowledge on each E.H.R product used, so engage internal staff to help with this process.

"Initially our experience has been that anyone we have been working with ideally wants to connect their electronic health record systems, but the effort is not 90% us and 10% them, it's really 50% us and 50% them. The health centers need to get their system set up to connect with the texting platform, but everyone is busy, so moving this forward has been one of our challenges."

– Vendor

Grantee Profiles

PROVIDING HEALTH INSURANCE INFORMATION TO YOUNG ADULTS

With the rollout of the Affordable Care Act, the need to enroll young adults in health insurance as they transition to adulthood is greater than ever before. However, many young patients at Asian Health Services (AHS) are unaware of the importance of signing up for insurance or about the options that are available to them. As one AHS staff member notes: "Our youth patients aren't aware of all the changes that are going on with health insurance. They are unaware of their insurance status and often don't know if they have a primary care doctor."

To help proactively reach out to the youth, AHS decided to launch a text messaging project in the health center's Youth Program. The staff knew that texting is a useful tool for communicating with youth based on their prior experience reminding patients of upcoming appointments through an office cell phone. With funding from Center for Care Innovations' Texting for Better Care Program, they intended to reach out to young adult patients (ages 18–24) by text and encourage them to come into the clinic for insurance information and assistance.

> **SNAPSHOT**
>
> - **Goal:** Increase access to health insurance information and assistance with enrollment
> - **Population:** Young adult patients (ages 18–24 years old)
> - **Vendor:** Ellipsis Health
> - **Text Directionality:** Bi-directional
> - **Consent Process:** Patient can select texting as a communication option during their registration

After researching potential texting vendors for several months, the clinic selected Ellipsis Health to create a texting platform that would save them time from individually texting youth through the office cell phone. They also reviewed the Youth Program's registration form and added texting as an option that patients could check and opt-in during the registration process.

While Ellipsis Health had the technical expertise, they also worked with AHS to conduct focus groups with youth to determine the types of messages and interactions that would engage the youth. Based on this information, AHS developed messages to ask whether the youth would like to receive more information about insurance options; if the youth responded positively (i.e., text back "yes"), AHS staff would conduct a follow-up phone call to schedule an appointment with a Youth Program Community Health Specialist.

Once the system was ready in November 2014, AHS health educators began a pilot round of texting with a small group of patients at their Teen Clinic. They found that some patients were confused by the text messages and received few responses to their outreach. To tackle this challenge, AHS staff revisited the process and began making phone calls ahead of the text messages to make sure recipients were aware of the texting campaign and its purpose. They then re-engaged patients in early 2015 by sending up to three messages encouraging them to sign up for insurance before the end of the February open enrollment. In addition to their insurance reminders, they also began using the texting platform to remind patients about upcoming appointments.

Ultimately, the level of patient engagement was lower than they had initially hoped. Of the 263 patients who received at least one text message, 63 patients indicated that they wanted to set up an appointment to discuss insurance options and 2 enrolled in an insurance plan. While the project experienced limited success in encouraging insurance enrollment, AHS staff learned important lessons that they plan to apply to texting moving forward. For example, they found that the web-based texting platform was an effective tool to conduct simple and quick outreach to patients, which saved staff time. They also learned the importance of notifying youth patients of the texting campaign or providing introductory messages. Project staff reflect, "It's a learning experience for all of us…. We can grow from it and expand to bring this [texting] more into our work."

Looking toward the future, they anticipate moving forward with the texting platform within their Youth Program, including reminding patients about upcoming appointments and following-up with youth who attend in-person events to ask if they want to make an appointment. Staff note, "We've been talking about what's been working and how we can and try to make a bigger impact with the texting moving forward."

SUPPLEMENTING PHONE APPOINTMENT REMINDERS WITH TEXT REMINDERS

Golden Valley Health Centers (GVHC), a health center with 26 clinic sites throughout the Central Valley, conducts over 400,000 billable patient visits per year, and almost half of these visits are advance care appointments. Given this high volume, GVHC uses an automatic phone system to remind patients of their upcoming appointments. Over the years, staff observed that GVHC's appointment "no-show" rate remained consistent, and they decided to test new ways to lower the rate and improve their capacity to serve their patients.

GVHC staff thought that adding text message reminders to their current system could potentially be the solution. They wanted to develop a project where the phone system would continue to call patients 48 hours prior to their appointment, but the calls would be supplemented with a text message 24 hours later. They had begun researching texting vendors and drafting the text message content when they heard of Center for Care Innovations' Texting for Better Care Program. They saw this as an opportunity to jump-start the project.

SNAPSHOT

- **Goal:** Reduce "no-show" appointment rate and improve overall patient access to care
- **Population:** Patients who have a scheduled appointment at any GVHC site
- **Vendor:** Twilio Communications
- **Text Directionality:** Bi-directional
- **Consent Process:** Language about texting is integrated into the health center's "Consent to Treat" form

With the planning process already underway when they received the grant, GVHC continued to set up the project. They revised their patient consent to treat forms to include language about texting and other electronic communication, then distributed it to all of their sites. They also began developing their Twilio Communications texting platform to send automatic appointment reminders and receive patient responses. Twilio's platform did not come with all of GVHC's desired functionalities preconfigured, but with a relatively low cost at $0.01 for each 160 character text, they decided to use this platform. They also recognized that their IT staff would need substantial time to program the system, so they also decided to invest time to interface the texting platform with their NextGen electronic health record system.

From the beginning, GVHC planned to pilot test their texting project at two clinic sites—a medical and a dental clinic in Los Banos—before expanding to the other 24 sites. GVHC has a history of pilot testing new interventions at these two sites, so managers and staff have familiarity and comfort level with integrating new processes into their workflows. The pilot phase began in June 2014 when the text messages were launched. The project team encountered an early challenge when they began to see a fairly persistent rate of undeliverable text messages—either the patient's cell phone number was incorrect or had changed. Excluding this minor problem, the overall process was working well enough to implement it more broadly. In September 2014, GVHC expanded the program to all 26 sites.

The project team continued to monitor and adjust the project once it was rolled out to all the sites and identified another area for improvement. Appointment cancellations made through the phone system were entered manually by staff at the end of the day, after completing all the calls. This meant that an appointment cancelled early in the morning was not available in the system until hours later, frequently too late to fill the appointment. Since the texting platform was integrated with GVHC's electronic health record system, staff realized that it was capable of opening up a cancelled appointment in real time. As one project staff member notes: "When someone cancels an appointment, it is instantly made available, so anyone can see that the appointment is open. One minute it shows that the patient was coming to the appointment and the next minute it shows that the appointment is available for someone else who may be calling in."

This realization spurred the team to launch a second "mini-pilot" at the Los Banos sites, in which the clinic staff switched the order of the text messages and calls. Now patients received a text message first followed by a phone call. This meant that, even if patients responded to text messages at approximately the same rate as phone calls, the text messages freed up times for same-day appointments more quickly.

Each week since September 2014, almost 7,000 text reminders have been sent to GVHC's patients who have advance appointments, including those with non-billable health promotion visits. Since adding text messaging to their phone reminder system, staff have found that patients are more likely to confirm or cancel their appointments (26% confirmed or cancelled with the phone only as compared to 58% with the text message and phone combination). They have also seen a modest but significant drop in "no-show" rates (30% prior to text messages as compared to 20% afterwards). The project lead calculates the benefit, "Assuming that approximately 230 visits open up a week at a reimbursement rate of $115 each and we fill at least 90% of those…that's $1.2 million due to this technology alone." Beyond the financial return, GVHC also views text messaging as an effective method to improve follow-up care compliance.

The texting project has shown that this intervention is successful, cost-efficient and scalable. GVHC intends to absorb future costs of texting into regular operating costs (e.g., vendor fees, staff time) and expand their efforts to improve patient communication around a variety of topics, including health promotion and immunizations, where texting can have a direct impact on patients' health outcomes. Reflecting on the project, staff say, "Why did we wait so long? True total patient engagement will only be facilitated by technology, not solved by it."

DEVELOPING NEW SYSTEMS TO IMPROVE PATIENT TRANSITIONS FROM THE HOSPITAL TO A MEDICAL HOME

In early 2014, the Los Angeles County Department of Health Services' (LACDHS) Olive View-UCLA Medical Center (OVMC) leaders and staff pursued several innovative projects to ensure continuity of care for their patients and avoid unnecessary re-hospitalizations. OVMC had recently developed an automated e-mail system to notify its patient-centered medical home about patients' inpatient and emergency department admissions and discharges.

OVMC recognized Center for Care Innovations' Texting for Better Care Program as an opportunity to enhance this system so care managers could more reliably track patients through their stay at the hospital and follow up accordingly. They decided to engage Ellipsis Health, with whom they had a previous relationship, to design a web-based, patient transition tracking system with text messaging functionalities.

The system helps care managers conduct patient follow-up through three bi-directional text message exchanges: 1) a text that introduces the patient to their medical home and asks if they want to receive texts, 2) a text that asks if the patient has a follow-up appointment in the coming week, and 3) a text that asks if the patient has enough medications to last until his or her appointment. The system records the patients' responses to the OVMC-initiated texts and prioritizes patients based on their responses; those without enough medications and a timely follow-up appointment are listed as the first priority for care managers to contact. As project staff describe, "the automatic discharge transaction in the electronic health record triggers an e-mail and the cascade of text messages that ultimately populates the web-based tracking platform."

After OVMC and Ellipsis Health developed the patient tracking and texting platform, LACDHS leadership needed to ensure it met HIPAA standards. During this process, the leadership decided to develop consistent texting policies and patient consent forms across the entire Los Angeles County health system. As OVMC staff awaited approval, they learned LACDHS decided to put site-level technology projects on hold indefinitely as they prepared to launch a new, County-wide electronic health record system. The hope for the new electronic health record is to develop an integrated and standardized approach across the County health system, which serves almost 10 million residents.

In spite of not being able to move forward with the texting project, OVMC still identified important learnings and results. First, the project led staff to examine and refine workflow and processes for care coordination. Second, texting as a tool to improve healthcare delivery and case management is now more prominent on LACDHS leadership's "radar." Furthermore, through this experience, Ellipsis Health developed a new, web-based patient tracking and texting platform that can potentially be replicated in other organizations. Reflecting on the experience, a project staff member

SNAPSHOT

- **Goal:** Improve care transitions between inpatient or emergency department settings and patient-centered medical home
- **Population:** Patients 18 years or older who have been recently discharged from inpatient or emergency department settings at OVMC
- **Vendor:** Ellipsis Health
- **Text Directionality:** Bi-directional
- **Consent Process:** LACDHS is exploring a standardized, County-wide consent process

offers an important piece of advice to others, "In addition to understanding the end-user's experience, get project buy-in at the highest levels of leadership early on. It's better to know about issues earlier than later."

USING TEXTING TO REDUCE MISSED APPOINTMENT & INCREASE PATIENTS' SELF-MANAGEMENT

In January 2014, Northeast Valley Health Center (NEVHC) began its first foray into texting with two separate projects: one focused on reducing "broken appointments" (i.e., patients not showing up for scheduled appointments) and the other on reducing patients' blood pressure. The health center viewed these projects as opportunities to test and learn about two different texting applications. Center for Care Innovations' Texting for Better Care Program provided support for the blood pressure management project, whereas other funds supported the "broken appointment" project.

NEVHC staff began both projects by researching text messaging platforms and vendors. After careful consideration, they purchased the hardware and software from Teletask and planned to have their IT staff install and program the system. While both projects moved forward with the planning phase, NEVHC decided to launch the "broken appointment" project first since it was a simpler process. Setting up the platform took longer than expected because staff were working with a completely new system, but soon the health center was ready to deploy their first text messages.

The "broken appointment" project launched as a pilot at one of NEVHC's clinic sites. An introduction message was sent out to all active patients with cell phone numbers to inform them about the new capability and allow them to "opt-out" of future text messages. Soon after, text messages requesting that patients confirm or cancel their upcoming appointments were sent one day in advance. Staff saw that the text messaging at that pilot site "was very well received and fairly effective," so they began rolling the project out to additional sites. While they began to see that the "broken appointment" rate did not decrease significantly (23% to 22%), same-day appointment slots opened up as patients were prompted to cancel their appointments in advance. A project staff member emphasizes, "Having more appointment slots available is a tremendous value for us. It wasn't what we expected to occur through this project, but it is certainly valuable because we have huge access to care issues."

NEVHC's second project introduced text messaging as a supplement to the health center's existing Home Blood Pressure Monitoring program. This program aims to help patients with high blood pressure self-manage and ultimately reduce their blood pressure levels. Patients attend in-person health education classes and borrow blood pressure monitoring equipment to measure their blood pressure at home.

SNAPSHOT

- **Goal:** Reduce rate of "broken appointments"
- **Population:** All NEVHC patients with upcoming appointments
- **Vendor:** Teletask
- **Text Directionality:** Bi-directional
- **Consent Process:** Patients have the option to opt-out through a text message

SNAPSHOT

- **Goal:** Help patients with high blood pressure or hypertension reduce their blood pressure levels
- **Population:** NEVHC patients who are part of the Home Blood Pressure Monitoring program
- **Vendor:** Teletask
- **Text Directionality:** Bi-directional
- **Consent Process:** Patients opt-in by signing a consent form

To assist patients, staff created a tiered text messaging system that sends an initial message asking patients to check and text back their blood pressure levels while they are at home. Based on the patients' response, the system automatically sends one of three follow-up messages to encourage patients to maintain healthy levels or to schedule a visit to check dangerous levels. The system then sends a message to the patients every day for two weeks to promote regular blood pressure checking.

Before launching the project, staff developed a text messaging [consent form](#) for patients to sign up for texting when they started the Home Blood Pressure Monitoring program. Of the 115 eligible patients, 80 opted out for various reasons, including not knowing how to text, not owning a cell phone, sharing a phone with family members and not wanting to pay for the texts. Given the small numbers of participating patients, the NEVHC team decided to expand the text messaging to a broader patient population beyond the Home Blood Pressure Monitoring program. They thought that more general self-management goal text messages (e.g., healthy eating, increasing exercise, taking medications) could benefit a larger number of patients; in addition, this was a priority area for the health center as they worked toward obtaining patient-centered medical home status.

The blood pressure monitoring texts launched in February 2015, and the self-management goal texts launched the following month. Due to a long interim period between giving consent and receiving text messages, some patients lost interest and were not engaged with the messages. In the end, NEVHC staff engaged fewer patients then they had hoped: 15 patients received blood pressure monitoring text messages, and 20 received self-management goal text messages. Patient response to the text messages was minimal, with only 12 patients responding. Looking forward, the NEVHC team plans to continue engaging patients in text messaging, allow more time to see results and test the full functionality of the Teletask platform.

CLOSING THE LOOP ON REFERRAL APPOINTMENTS THROUGH TEXTS

Primary care provider referrals create significant demands on health centers' resources, especially monitoring if and when patients follow through with their appointments. In late 2013, Petaluma Health Center (PHC) had a long backlog of approximately 2,500 "open" referrals at any given time. It was a time-consuming process to call patients to ask if they had scheduled their referral appointment. PHC even hired a dedicated Health Information Specialist to keep up with the endless backlog of calls confirming that referrals were closed. The amount of time spent on this process was seen as an area ripe for improvement and increased efficiency.

When PHC became aware of Center for Care Innovations' Texting for Better Care Project,

SNAPSHOT

- **Goal:** Close more open, non-urgent referral appointments
- **Population:** Patients with non-urgent referral to a provider outside Petaluma Health Center
- **Vendor:** eClinicalWorks
- **Text Directionality:** One-way
- **Consent Process:** Patients opt-in by signing a consent form during pre-appointment registration

they decided to design an intervention to better manage the referral process by closing as many non-urgent referrals as possible via text message.[1] The average time between the opening and closing of a referral was two months; the project team hoped this time could be reduced to four weeks. PHC began speaking with representatives from eClinicalWorks (eCW), their electronic health record vendor, about enabling texting through their system. They initially thought that eCW could provide bi-directional texting but soon discovered that this functionality was not yet available. This presented a major challenge and led PHC to roll out their project in two phases: The first phase would send out one-way text message reminders to patients who had opted in to the texting program. In the second phase, PHC hopes to launch a more dynamic system that would remind patients to schedule their appointments, receive patient responses and store them in their electronic health record.

From the beginning, PHC faced challenges that affected the evolution of their project. The team first developed the message content based on the understanding that eCW's texting platform could support up to 240 characters; in reality, the system had a firm 160-character limit. Another challenge had to do with consent—the project team developed a standard consent form that the front office staff would administer to all patients when they came in for appointments and then scan it into the patients' files. However, the eCW system was automatically enabling text messages for every patient, regardless of whether they had signed this form. This caused a delay in the project as the team worked with eCW to resolve this issue.

Additionally, after the first phase of the intervention launched, another issue surfaced. The project team was surprised by the lower-than-expected number of referrals being closed. After looking into this issue, they realized that staff were not consistently entering referral appointment dates into their system, which represented the dates of referral closure. The project team worked quickly with staff to adjust their processes and instituted a policy to standardize the tracking of the appointment dates. The project team feels confident that this will greatly improve PHC's ability to track referral outcomes going forward.

Thanks to the lessons learned from working through these challenges, PHC has seen initial impact from the first phase of implementation. Now that they are fully tracking closure dates, the project team has seen a reduced number of pending referrals. Also, the work that was done to improve the internal processes around tracking referral closure has focused the staff on refining their workflow beyond the scope of this texting project. The new focus on workflow efficiency has led to a much better turnaround process for referrals in general. Staff are also fully invested and engaged with texting—it has freed up much of the time that they used to spend making phone calls, and front office staff are actively encouraging patients to fill out the texting consent form to further reduce the amount of phone calls.

Unfortunately, due to unforeseen limitations and unresolved bugs in eCW's new, bi-directional texting platform, the second phase of the project has been delayed. PHC hopes to begin implementing bi-directional texting in the second quarter of 2015. Meanwhile, they plan to expand the use of text messaging into appointment reminders and confirmations. While this is still in the planning stages, the opportunity is clear and the project

[1] Non-urgent referrals are defined as those for which an appointment is not required within a 7-day period. They are non-critical appointments—recommended, rather than required, by the primary care provider.

team is optimistic. While they know that plans will inevitably change when implementing a new technology, they are certain that this initial effort will lead to future texting projects.

TEXTING DIABETIC PATIENTS TO ENCOURAGE PROGRESS TOWARD SELF-MANAGEMENT GOALS

In 2013, Riverside County Health System (Riverside County) invited Ellipsis Health, a health information technology vendor, to conduct a series of on-site demonstrations of their texting platform. Riverside County had never attempted health-related texting and was interested in how they could effectively leverage this technology. When Center for Care Innovations launched the Texting for Better Care Program in early 2014, Riverside County was selected to implement text messaging as a tool for health coaches and dieticians to supplement their current work with diabetic patients. As part of this work, health coaches and dieticians help patients select self-management goals to manage their diabetes, then meet with patients in person and by phone to encourage patients to meet their goals. However, program staff note, "we discovered that a lot of the patients are working during the day and didn't have time for a phone call. They just needed a quick reminder." Texting was an obvious and exciting option.

To create a texting system that would work for everyone involved, the team met with a wide variety of staff who would manage, send or receive the text messages. They elicited input on the project design from health coaches, dieticians, patients and support staff. Based on this input, Ellipsis Health created a platform that health coaches and dieticians could use to augment the number and type of interactions they have with their patients.

The platform was designed so that coaches and dieticians could pull up their patients in the system and customize a text message to send. While there was no standard template, the health coaches' messages were generally educational (e.g., physical activity, diet, monitoring blood sugar, medication management) or motivational (e.g., encouragement to reach goals). To navigate HIPAA compliance with the text messaging, health coaches were instructed to avoid messages that included protected health information. As the project lead notes, "We've tried to be extra careful…. We not only avoid information that would be considered sensitive, but we also have patients sign a paper consent form, as well as another consent in our initial text."

The text messaging was launched in July 2014. After addressing an initial challenge with the agency's Wi-Fi connection, staff began to see both anticipated and unanticipated benefits. For instance, while the team originally only intended to use the platform to track diabetic patients participating in the texting program, once it was fully functional, they found that it was an effective way to track all patients who received health coaching. As of March 2015, across 13 sites, over 450 patients have signed up and been entered into the texting platform; 67% have set self-management goals primarily focused on nutrition, exercise, and blood pressure or sugar levels. Over the past year, patients have started to work toward their goals with the encouragement of health coaches or dieticians with 13% partially achieving their goals and 10% fully achieving their

> **SNAPSHOT**
>
> - **Goal:** Help patients with diabetes achieve their self-management goals
> - **Population:** Diabetic patients
> - **Vendor:** Ellipsis Health
> - **Text Directionality:** Bi-directional
> - **Consent Process:** Patients sign consent form and are asked for consent in the first text message

goals. The project team also recently discovered that, among the 71 diabetic patients who have been involved with the texting program and who have had at least two HbA1c tests, there average decline in HbA1c has been 1.8.

Riverside County is continuing to develop the platform and is currently talking with Ellipsis Health about creating an interface between the texting platform and their electronic health record system so they can more easily track clinical outcomes. They are also thinking of ways to expand texting within the broader health system, including inviting providers to use texting, expanding to more patients and applying it more broadly for patient appointment reminders. Staff continue to present learnings about texting at different clinic sites and leadership meetings throughout the health system, which is helping to promote the sustainability and spread of the program.

REDUCING "NO SHOWS" FOR PRIMARY CARE & POST-DISCHARGE APPOINTMENTS THROUGH TEXTS

When patients miss appointments it can create negative consequences for both health centers' operational efficiency and the health outcomes of their patients. At the San Francisco Department of Public Health's (SFDPH) clinics, staff members often call patients up to three times to remind them of upcoming appointments. This process consumes a significant amount of resources and staff time that could be allocated elsewhere.

When SFDPH heard about Center for Care Innovations' Texting for Better Care Program, they saw an opportunity to reduce the amount of these missed appointments—or "no shows"—for both primary care and post-hospital discharge appointments. The team designed a project for text messages to replace phone call reminders at one of their community-based primary care clinics, Maxine Hall Health Center (Maxine Hall), while also testing texting as an add-on component to phone calls to post-discharge patients at the General Medicine Clinic (GMC), a hospital-based clinic. They determined that the text messaging would be piloted at Maxine Hall first and then tested at GMC.

The team at SFDPH decided to use the text messaging functionalities offered by their current electronic health records vendor, eClinicalWorks (eCW), after viewing a demonstration of their messenger module. Unfortunately, eCW's texting module only supported one-way text messaging at the time, and while this was sufficient to remind patients of appointments, it limited their ability to expand the project more broadly. While moving forward with eCW, staff recognize that they may eventually need to engage a vendor with more functionality, both around bi-directional texting and alignment with SFDPH's upcoming patient portal.

As project staff prepared for the launch of texting at Maxine Hall in June 2014, they also began the consent process. Staff asked patients to verbally consent to texting and responses were noted in eCW. However, after a few months of using this approach, they learned that SFDPH leadership

SNAPSHOT

- **Goal:** Decrease "no-show" appointment rate for primary care appointments and post-discharge appointments

- **Population:** Patients at Maxine Hall Health Center and recently discharged patients at General Medicine Clinic

- **Vendor:** eClinicalWorks

- **Text Directionality:** One-way

- **Consent Process:** Initially asked patients for verbal consent, then switched to written consent

wanted physical signatures from the patients due to HIPAA concerns. The project was put on hold while the team met with SFDPH's Privacy Committee to create a new consent form. When the form was approved, the staff had to restart their consent process. Given the work they had already done, some staff felt discouraged when patients who had previously consented had to be asked again to give consent or they had to be text-disabled in the system if the staff could not reach the patient. To increase staff motivation, the project team allocated funds to celebrate and incentivize staff as they reached specific patient consent goals. Eventually, the project began texting in October 2014 and Maxine Hall patients received either a text message or a phone call reminder about their upcoming appointments.

At the same time, the staff at GMC, were working to obtain consent from patients for texting while they were being admitted to the hospital. Once patients were discharged, staff conducted their regular calls to check in about follow-up care and schedule an appointment at GMC within 7 days. In addition to this process, a text message reminder was sent 2 days prior to their follow-up appointment.

Ultimately, the appointment reminder project at Maxine Hall had modest success in terms of reducing the health center's "no-show" rate (28% before text messages as compared to 23% afterwards). While texting did not eliminate many missed appointments, the reduction in staff time and resources used to conduct appointment follow-up by telephone was significant. At GMC, staff found that the text messages did not add much to their communications with patients and that phone calls were effective for coordinating care for their complex care patients. However, SFDPH conducted a patient satisfaction survey about the texting pilot, in which participating patients noted a very positive experience and a desire for more text messaging in other healthcare contexts, outside of these two pilot projects.

SFDPH still faces challenges as it considers expansion and replication of text messaging interventions in its other sites. However, the work that they have already done around HIPAA compliance has resulted in a consent form that can be used and adapted for different texting interventions. SFDPH will use this tool, as well as a wealth of new knowledge about text messaging, in their future efforts to leverage technology and improve health outcomes in all of their clinics. They look forward to expanding to other sites, developing bi-directional texting functionality and exploring new and different ways of utilizing texting to improve their patients' healthcare.

ENCOURAGING SUBSTANCE ABUSE RECOVERY WITH TEXTING

Sacramento Native American Health Center (SNAHC) has developed comprehensive substance abuse services that combine mental health and substance abuse counseling with traditional American Indian healing practices and values. One of the services is an 18-week, 12-step recovery program that is run in partnership with the White Bison Wellbriety Movement—a national grassroots organization that provides culturally-based healing to American indigenous people.

Particularly with outpatient programs, continuity of patient communication is important to maintain engagement and reduce the probability of relapse. When staff heard of Center for Care Innovations' Texting for Better Care Program, they decided to design a project to send automated, encouraging messages to individuals participating in the recovery program.

SNAHC had been running the White Bison recovery program since 2007 and had a strong relationship with the organization. They wanted the text messages to be both relevant and culturally appropriate for SNAHC's patients, so they contracted with White Bison to develop the content of the text messages. In addition, SNAHC began working with HealthCrowd as their technology vendor. They selected HealthCrowd because of the system's capability of sending messages according to a pre-determined schedule and logic based on the patients' text responses. With the project partners, messaging content and mechanics in place, the pilot project was launched in June 2014 and ran for 7 months.

During that time, the SNAHC project team faced several challenges. First, they found that it was harder than anticipated to engage patients. In response, the project expanded to include patients receiving individual or group substance abuse support services in addition to the original recovery program group. With this expansion, staff were able to engage 66 patients during the 7-month period of the pilot project. Another obstacle that the SNAHC team faced was difficulty interpreting the information they received from HealthCrowd, which was sent as raw data file. This meant that additional time and resources would be required to clean and analyze this data—time and resources that were unfortunately not available in the context of a busy health center.

Despite these frustrations, SNAHC received a very positive response from those patients who engaged with the texting program. Based on a patient feedback survey, the texts were seen as having a positive emotional, and even inspirational, impact. Like regular encouragement from a friend, the text messages helped consolidate resolve and increase motivation of some patients to stay committed to their recovery. The project team cites the connection to culturally-specific concepts and beliefs embedded in the text message content as essential for this success. However, because they were limited in their ability to interpret the available data and the population expanded beyond the White Bison program participants, it is not currently possible to determine whether the texting actually increased program participation or led to better maintenance of sobriety. Some patients expressed disappointment when the pilot program ended, which suggests that the messages had a positive impact.

There are several implications for the potential sustainability of this program and for expansion of text messaging in other SNAHC departments. For now, without additional funding, the pilot program will not be immediately replicated. However, the SNAHC dental department is exploring the use of texting for appointment reminders, and the team believes that this project has demonstrated potential value for other high-need behavioral health applications at the health center, such as diabetes control and nutritional health programs.

SNAPSHOT

- **Goal:** Further engage patients enrolled in substance abuse programs
- **Population:** Patients who currently receive substance abuse services through programs, treatment groups or counseling services
- **Vendor:** HealthCrowd
- **Text Directionality:** Bi-directional
- **Consent Process:** Program-specific consent forms are distributed to patients