

Texting to Find the Tipping Point

Submitted by: Parkland Hospital and UT Southwestern Medical Center

Gold Winner, Planning Stage

Category: Reaching the Patients in Need

Overview

[UT Southwestern Medical Center at Parkland Hospital](#) is a robust Palliative Care ambulatory clinic in a large county hospital. Patients are often referred at the time of diagnosis and may follow with us for years. When they start to take a sharp downturn in performance status, their instinct is to go to the Emergency Room rather than reach out to the clinic. We believe that could detect problems earlier by reaching out, rather than waiting for them to reach us. Our population has demonstrated little interest in MyChart or email, but are very comfortable with texting. We will send a short questionnaire weekly via text to all our ambulatory patients, asking a general well-being score and whether they need a return phone call. We will use this data to intervene before a crisis occurs in our racially diverse, socioeconomically disadvantaged population. The project will be funded as needed through a private endowment.

Impact

The vast majority of our patients want to die at home, but once they start to experience a physical decline, neither they nor their families are sure what to do. Until they reach a crisis, they tend not to reach out to ask. When they do reach out, it is to call 911. Although we try very hard to provide education about what things will be like as a patient declines during clinic visits, they are often not ready to hear it. Once they need the information, the patient may not feel well enough to come in. This has led to a situation over and over again where we find that a patient who has had one or two no-shows ends up in the emergency room and then either dies during that admission or is transitioned home on hospice. We have tried calling the no-shows, and had some success transitioning that group to hospice early, but often there has been a lot of suffering before that point. We do not have the bandwidth to bring them all in as frequently as we'd like, or to call them every week to check on them. Because of COVID our hospital acquired the technology to send out interactive surveys by text message. This is a tremendous boon to us. Because most of our patients lack access to computers and/or computer literacy, use of email or apps such as MyChart to communicate with them have been unsuccessful. However, almost all of them feel comfortable with texting. This is finally a way for us to reach out to all of our patients every week so they can let us know that they are okay. Many will ignore it, but those who are not doing well will have an easy, low-tech, low cost way to indicate that they are in distress. Our nurses, chaplains, social workers and physicians can then reach out before things get any worse to bring the patient to clinic, arrange services in the home, provide education about what to expect moving forward, order DME, manage symptoms, and all the other things that help mitigate suffering for patients and families at the end of life. I believe this has the possibility to create significant impact on the quality of life for this very vulnerable population we are serving. If the model is effective, it would be easy to transport to other programs as there is nothing about it that need be specific to our location.

Evidence-Base

This project remains in the early stages and we do not yet have data for analysis. Mobile phones are useful tools for healthcare interventions because of their widespread use and portability (Whittaker et al (J Med Internet Res 2012)). Because minority groups, those with lower household income, and those with lower levels of education are the groups most likely to text, (Smith A. et al. C.: Pew Research Center) they are the groups who perhaps might derive the most benefit from a text-message based intervention. In general, these are also groups who find text messaging an acceptable and even desirable means for receiving health-care related information. For example, Gibby et al. studied a population of new mothers in Hawaii and Puerto Rico, sending them regular texts with obesity prevention messages over a period of 18 weeks. Most participants like receiving the texts and 78.4% completed the 18 week program. In A 2015 review of the overall benefits of text-messaging in patients with chronic illness, the majority of the studies (46/60, 77%) reported improved outcomes, including improved medication or treatment adherence or appointment attendance. The major concerns were privacy (remedied by PHI from the text), and wrong or invalid mobile numbers. (Downing S et al Sex Transm Infect 2013)

What most of these studies lack, however, is a two-way function. A 2015 meta-analysis in the American Journal of Medicine (Wald, D, 2015) found that when comparing one way vs two-way text messaging to improve medication adherence, "The summary relative risk estimate was 1.04 (95% confidence interval, 0.97-1.11) for 1-way text messaging and 1.23 (95% confidence interval, 1.13-1.35) for 2-way text messaging. The difference in effect between the 2 methods was statistically significant (P = .007)." We therefore believe that text messaging is an acceptable and effective modality for communicating with the population we serve, and that two-way messaging will be superior to one way messaging at engaging our patients. We believe that the majority of patients receiving care in our clinic will find these messages acceptable and will remain engaged with prompted messages such as appointment reminders and whether they need a call back. We hypothesize that by being able to capture more regular information from our patient, particularly between visits, we will be able to prevent ED visits, improve patient satisfaction with their care, and transition them more effectively to hospice.

Feasibility

Our hospital is currently using technology that sends a text message daily to every employee prompting the completion of a survey regarding risk for COVID. Working with the Parkland Center for Clinical Innovation and Information Technology, we will use the same technology to send, by text, a message that opens a short survey asking the patient to rate their overall well-being on a scale from 1-10, and whether they would like a call back from the clinic (yes/no). If they would like a call back, they will be asked to select whether it is regarding symptoms, medications, appointment, or something else. They will also be given the option to stop receiving the texts. Should they elect to stop the texts, they will be notified that they may resume receiving them at any time. The texts will be sent one weekly. Data will be stored centrally. The lead investigator will be notified for any score of less than six, or a decrease of more than two. Nurses will be notified to call regarding symptoms or medications, and an administrative assistant will call regarding appointments and other. Data analysis will be accomplished with the aid of the statistics core of the Population Health section of the University of Texas Southwestern Medical Center at Dallas. No PHI will be included in the texts, and all data will be maintained on an encrypted hard drive. All research will be conducted under the purview of the IRB of UT Southwestern.

Scalability

This initiative could easily be scaled to serve the entire Oncology population at our hospital, or even the entire population of our health system if we had enough people to make the telephone calls. I anticipate that it would significantly decrease the number of ED visits if patients could have medication refills and clinic appointments made in a timely fashion. It would simply require creating a simple message to send out via this mechanism. The technology is already in place.

Sustainability

We do not believe that this will be a particularly expensive project. Aside from maintaining the database, which falls within the purview of the Center for Clinical Innovation, all employees will be continuing functions they are already providing. The technology is in place and does not require any purchases. Statistics will be managed by the Cancer Center and funded through the Lead Investigator's endowment funds. If this intervention is successful, the effects will be both immediate and long-term - patients will have better access to our clinic, be able to get refills, reach the nurses, let us know when they starting to decline so we can provide the services they need - but it will also help transform the culture of our institution into one that is more proactive. The initiative is supported by the administration in the form of the Parkland Center for Clinical Innovation.

Project Team

Mary Elizabeth Paulk, MD
Professor, Internal Medicine
UT Southwestern Medical Center
Contact: mandi.wiggins@utsouthwestern.edu

About the Challenge

The John A. Hartford Foundation Tipping Point Challenge is a national competition to catalyze the spread of skills, ideas, and solutions that will improve health care delivery for all people living with a serious illness. It is sponsored by the [Center to Advance Palliative Care](#) and [The John A. Hartford Foundation](#).

For more information, visit tippingpointchallenge.capc.org.