



Assessing the Effectiveness of *Partners in Quitting*; A Text Message-Based Smoking Cessation Program

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Introduction

Cigarette smoking is the leading cause of preventable disease and death in the United States, accounting for more than 480,000 deaths every year, or 1 in every 5 deaths.¹ In 2014, 16.8% of the U.S. population aged 18 years and older currently smoked cigarettes, which translates to 40 million adults.² While the rate of tobacco use has been steadily decreasing over the past two decades, it has recently started to plateau largely due to tobacco companies finding new ways to target young consumers and create more "youth-friendly" products.³ Therefore, there still remains a significant public health need to create innovative solutions to smoking cessation and preventing initiation.

Text Messaging as a tool to promote smoking cessation and health behavior change has been successful and well-received among many populations. In one recent study, participants who received an interactive, personalized text message cessation program had a quit rate of 28% compared to 13% in the control group who used standard Quitline resources.⁴ The use of text messaging for smoking cessation can be especially beneficial for low-income populations, as it can reduce barriers to access, such as cost, time, and transportation. A 2012 report estimated that 86% of American households earning less than \$30,000 owned a mobile phone, whereas only 47% of these households had internet access at home.⁵

Objectives

- ❖ To provide a comprehensive, interactive, evidence-based smoking cessation program via text messaging that is free of cost
- ❖ To provide participants with education and information to effectively recognize and avoid smoking triggers, fight cravings, understand the health, social, and economic benefits of quitting smoking, and improve self-efficacy.
- ❖ To assess the effectiveness of the program using measures such as participant satisfaction, awareness and self-efficacy, and smoking behaviors.

What is CareMessage?

CareMessage is a not-for-profit organization that connects health care institutions with innovative mobile- and web-based health communication technology. CareMessage has provided *Partners in Quitting* with access to its web-based platform free of cost. The platform has allowed us to upload the text message content onto the system and create a time schedule that automatically sends the messages to participants at the pre-assigned time. Many of the text messages are interactive and prompt participants to answer questions; these responses then populate back into the system, allowing us to track progress. The platform also allows us to "instant message" participants individually and provide counseling and guidance in real time.

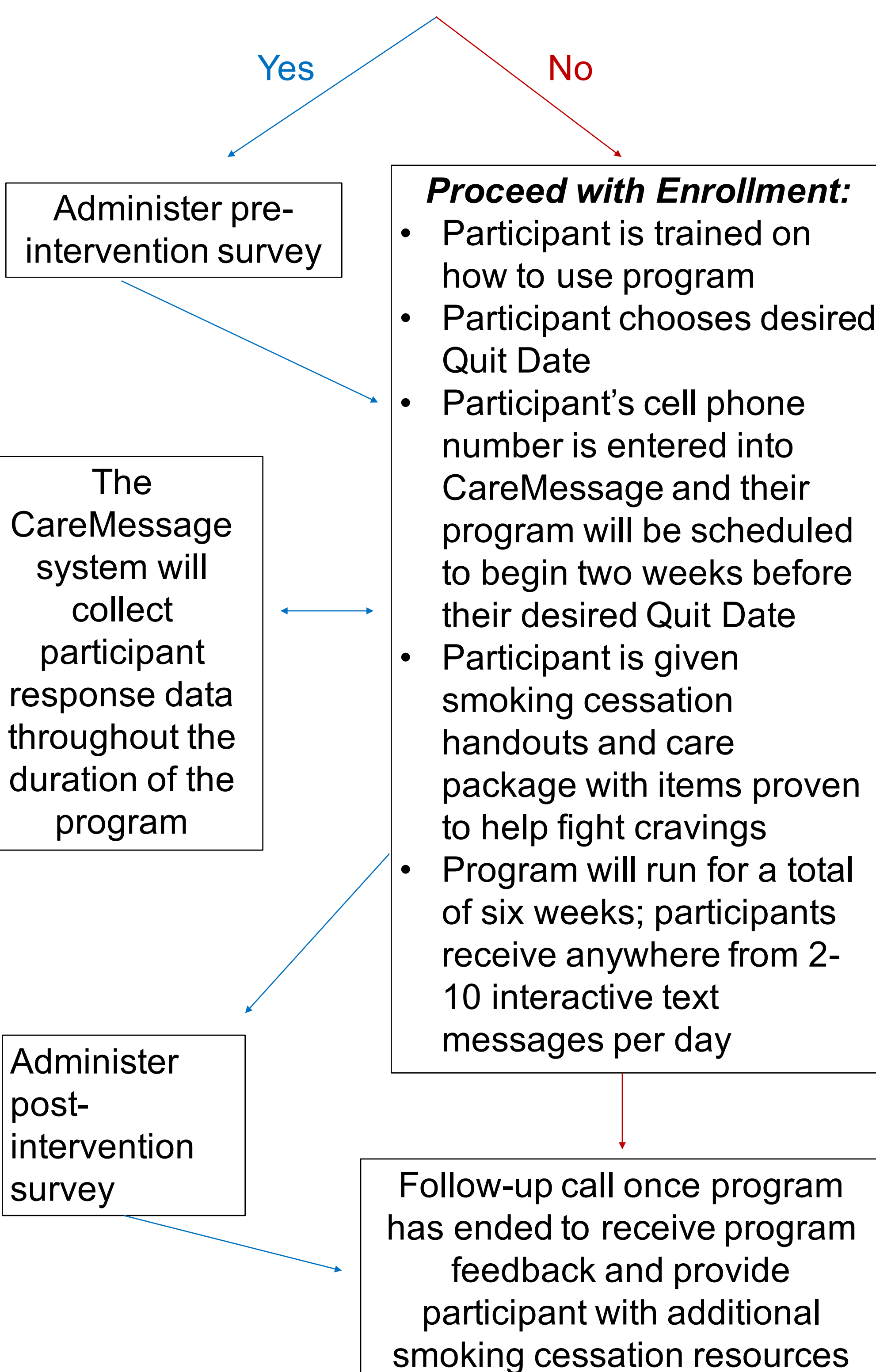
Methods and Materials

Recruitment/Enrollment Algorithm

Ongoing recruitment of participants at Bread for the City, an organization located in Northwest Washington, DC that provides free health and social services, via flyers, physician referrals, and word-of-mouth

- Eligibility Criteria:**
- Age 18 or older
 - Speaks English or Spanish
 - At least at the "Contemplative" Stage of Change according to Prochaska's Model

Has participant consented to participate in the research aspect of the program? (i.e. participant has signed IRB-approved consent form allowing collection of nonidentifiable data during the program)



Partners in Quitting in Action!

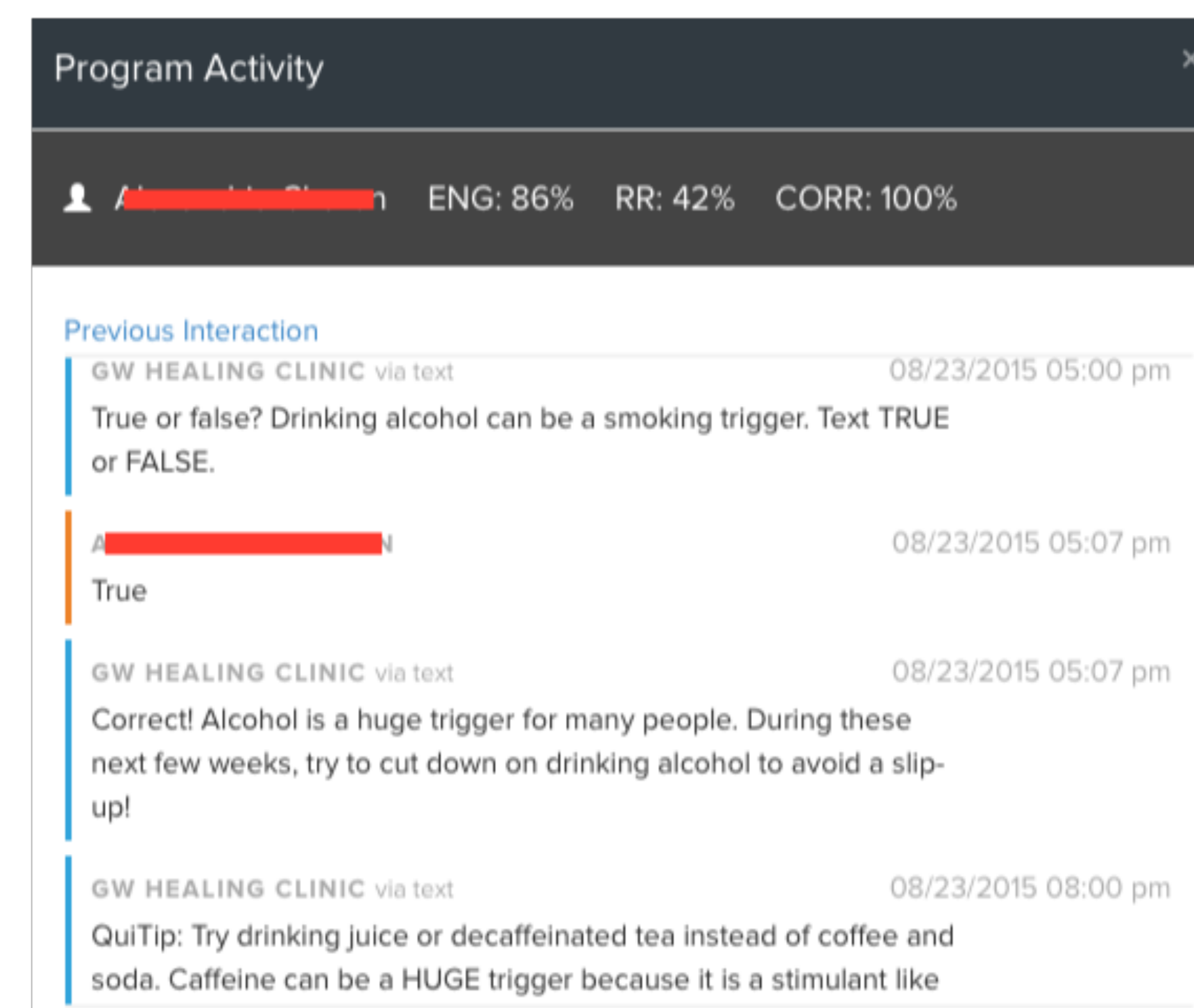


Image 1. Client receiving and responding back to the automated text message content, as seen from the CareMessage platform

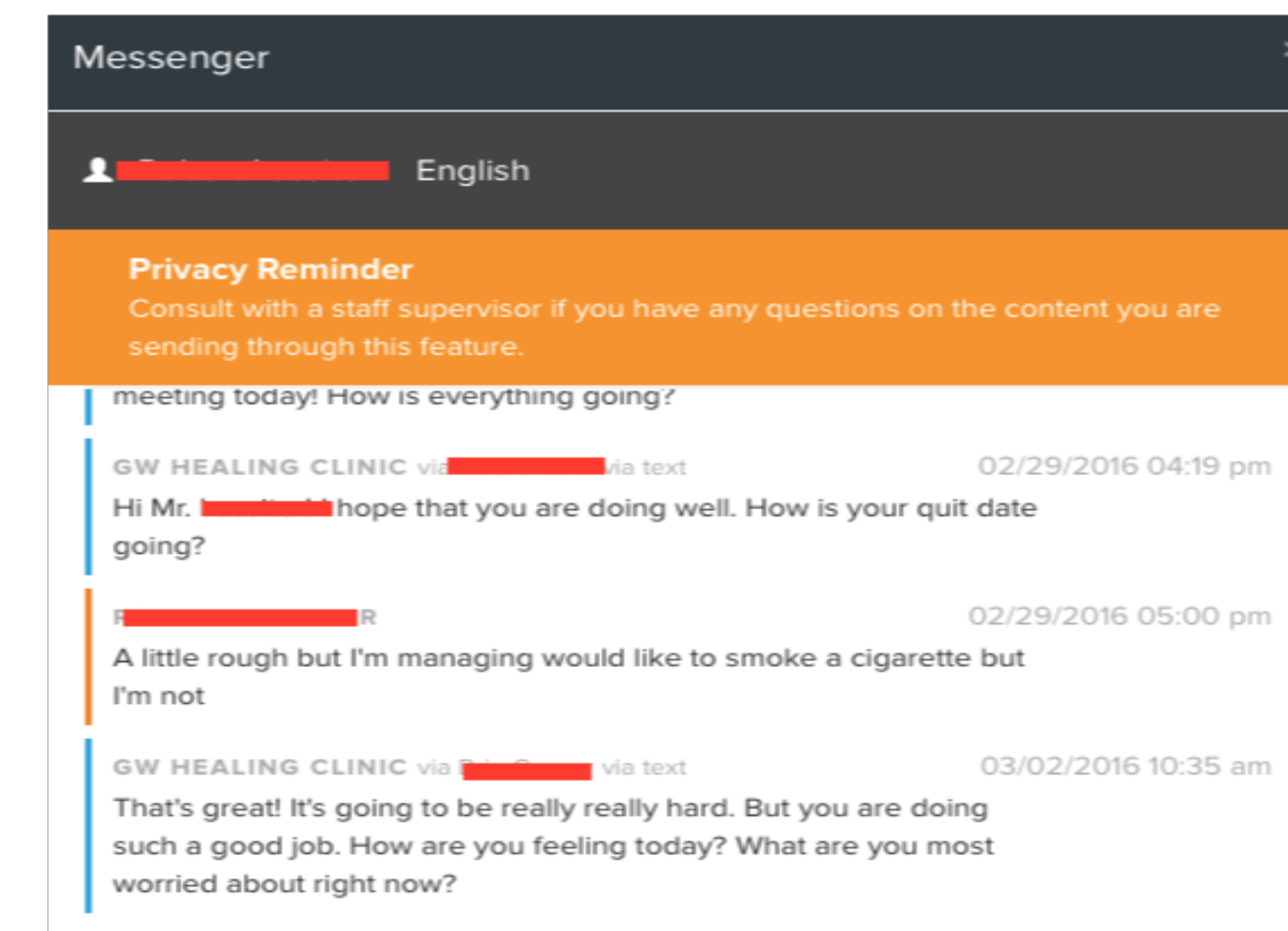


Image 2. Client engaging in a conversation with Bread for the City's Resource Coordinator using the instant messaging feature, as seen from the CareMessage platform

Blog For The City

Partners in Quitting: A BFC smoking cessation program

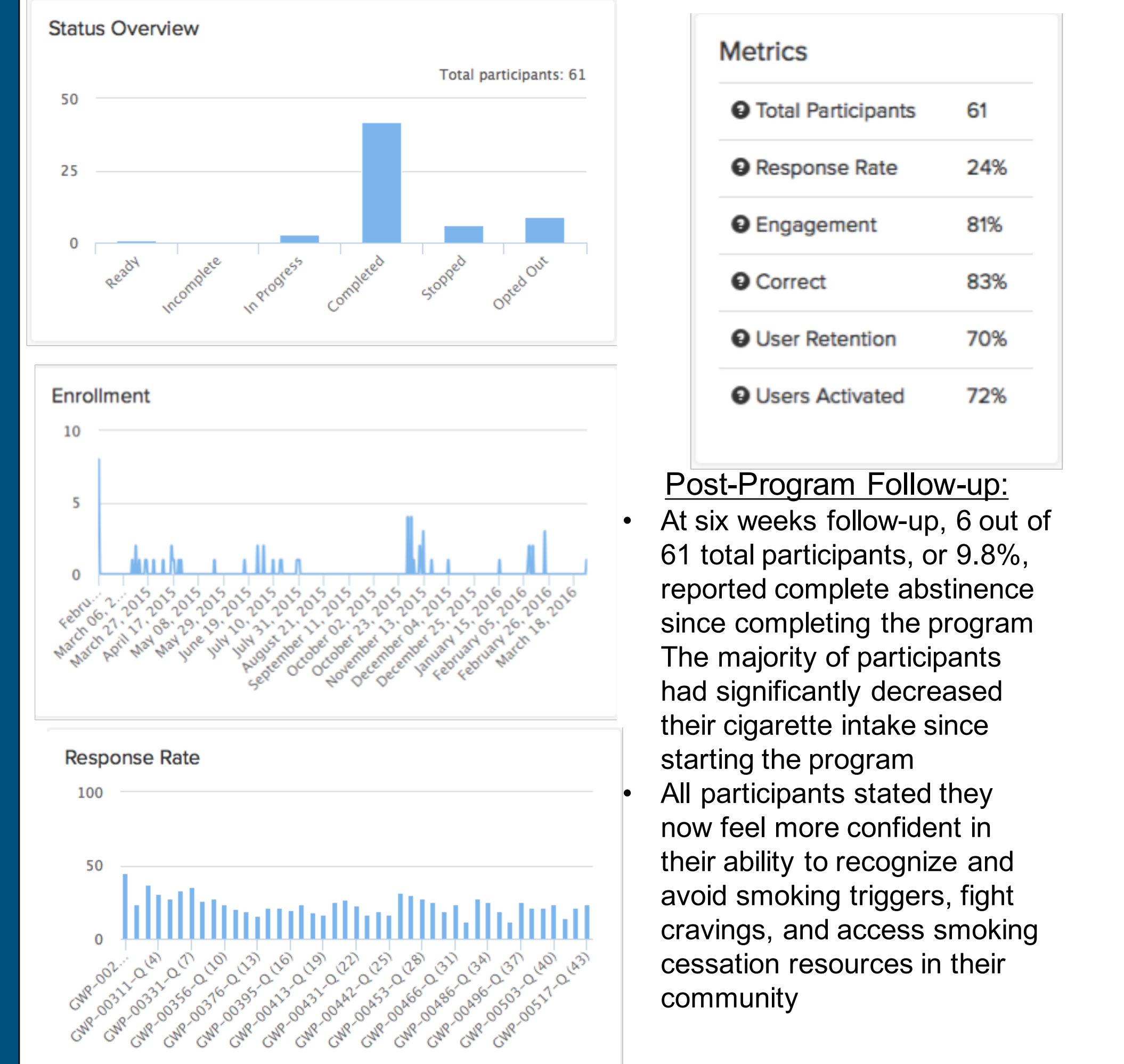
Written on Wednesday, March 4, 2015 at 4:21 pm by Tim Whelden in Uncategorized
After many months of preparation, enrollment is now open for Bread's text-message based smoking cessation program called "Partners in Quitting".
Through an organization called CareMessage, participants receive six weeks of pre-written smoking cessation text messages to their cell phone, some of which are interactive (multiple choice or T/F) with the goal of educating and motivating people trying to quit and giving them some kind of companionship. They can also receive personalized responses to questions or complaints from our staff member Tim or a volunteer (and they can ALSO get anonymously connected with someone else in the program to text with as a Quit Buddy).

DO YOU WANT TO FINALLY KICK THE HABIT?

This program is mostly for people who express a readiness to quit, a desire to learn how to quit, have a

Image 3. Partners in Quitting being promoted in Bread for the City's blog

Preliminary Results



Discussion

Since implementing the program one year ago, we have enrolled a total of 61 participants, with a user retention rate of 70%. 6 of the 61 participants, or 9.8%, reported complete abstinence at six weeks follow-up. Of note, we were not able to get in contact with the majority of participants at follow-up, and so the rate of abstinence may actually be quite higher. Of the participants who did not remain abstinent, the majority reported that they were smoking significantly less cigarettes per day since completing the program. All participants stated they now feel more confident in their ability to recognize smoking triggers, fight cravings, and access local smoking cessation resources.

One major limitation of the study was loss to follow-up. It has been difficult to determine the success of the program due to the fact that we could not get in contact with the majority of participants at six weeks follow-up. We are currently working to remediate this situation by attempting to contact clients for follow-up via text message and email instead of by phone call so that they are able to respond at their own leisure. Another study limitation was the inability to biochemically confirm that those who stated they had remained abstinent had actually done so.

Partners in Quitting has the unique ability of being able to provide people with comprehensive, evidence-based smoking cessation counseling without having to overcome common barriers to access, such as cost, lack of transportation, and lack of time. This aspect is especially significant in low-income and rural populations. As we continue to become a technology-driven society, we must recognize that incorporating technology into our current practices can no longer be the exception; it has to become the norm; and this notion certainly holds true for smoking cessation.

References

1. "Current Cigarette Smoking Among Adults in the United States." (2015). *Centers for Disease Control & Prevention*. Retrieved from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/adult_data/ig_smoking/index.htm.
2. "The Health Consequences of Smoking- 50 Years of Progress." (2014). *U.S. Department of Health and Human Services*. Retrieved from http://www.cdc.gov/tobacco/data_statistics/sgr/50th-anniversary/index.htm.
3. Rodgers, A, Corbett, T, et al. Do u smoke after txt? Results of a randomized trial of smoking cessation using mobile phone text messaging. *Tob Control*; 2005; 14(4):255-261.
4. Abrams, L, Boal, AL, et al. A randomized trial of text2quit: a text message program for smoking cessation. *Am J Prev Med*; 2014;47(3):242-250.