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CASE STUDY

UNIVERSITY OF CALIFORNIA SAN FRANCISCO

UCSF
University of California
San Francisco

"Boomerang gave the opportunity to rapidly evaluate participants' responses to messages and respond quickly to messages that failed to provide value to participants. The latter aspect is of particular importance for actively engaging patients with their health care enterprise." *James S Kahn, Chair of the UCSF Research Administration Board*

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DYNAMIC SCHEDULING

BACKGROUND

The University of California San Francisco's Medical Informatics Group is a cross section of IT, medicine, and health care focusing on consulting, project management, and IT services. The group enables medical data to be immediately computable and accessible for use in healthcare. UCSF completed a research study to measure the effectiveness of a CRM based model for healthcare enterprises. This particular study focused on CRM for SMS texting from an Electronic Health Record (EHR) by collaborating with Boomerang and their strategic partners Avanade Inc.

INDUSTRY: Healthcare
WEBSITE: www.ucsf.edu

CHALLENGE

Maintaining relationships with patients in the medical community is a challenge, and the biggest hurdle in these relationships comes down to doctor-patient communication. Traditionally, the most common method of communication, whether for reminders or following up on a patient's progress, has either been by phone or in person. These methods are valuable in certain circumstances, but for the distribution of information such as medication reminders, diagnosis messages and appointment reminders, they are time consuming and expensive.

An automated SMS system is an economically viable option when compared to maintaining a call centre, as it offers a quick and succinct method of bulk communication. Nevertheless, manual management of database updates is an arduous task and the benefits of the immediate outbound communication decrease if more staff have to be employed to maintain and manage the incoming messages.

In order to fully automate interaction between the enterprise CRM application and the electronic health record, the inherent problem of traditional SMS needed resolving. This limitation, as identified by UCSF, was the inability to record the message ID so that later replies from patients are matched and associated with the original message; this was the problem that Boomerang solved.

"The project demonstrated that a significant no. of participants were engaged by the CRM & SMS system and their participation was unusually high"

James S Kahn, Chair of UCSF Research Administration Board

OBJECTIVES

For the scope of this research UCSF set out the following goals and objectives:

- Develop a customer-centric model to deliver care through the existing electronic health record utilising technological applications.

- Facilitate research of the customer centric model to potentially reduce health disparities between patients receiving care with certain diagnosis, and increase patient interaction with healthcare enterprises.

- Implement a CRM platform to organise defined information such as diagnosis, medications, demographic and contact information.

DYNAMIC SCHEDULING

SOLUTION

Boomerang intelligent SMS uses its unique patented technology to enable any mobile device to integrate into business-related functions, using threaded SMS.

Boomerang matches outbound messages with their associated inbound responses, irrespective of the quantity and sequence of the messages. The benefits are two-fold: patients are not required to enter complicated key words into their message, and back office staff are not required to monitor and match incoming messages. Instead the CRM platform and respective API's analyse the inbound message and forward the relevant outbound responses depending on the content of the message.

By using Boomerang the health care providers can effectively manage their patients health, and measure their progress and behaviour via SMS efficiently.

> Boomerang was key in "actively engaging patients with their health care enterprise"
>
> *James S Kahn, Chair of UCSF Research Administration Board*



RESULT

Boomerang has solved the problems that The Informatics Group of UCSF faced, and has helped them achieve the goals and objectives set out to achieve when the project started.

The Boomerang service has enabled them to:

- Develop a clinical application that improves the care of patients, by connecting patients to their health record, educating them in the instance of diagnosis, and engaging with them by sending them medication and appointment reminders.

- With the use of Boomerang, UCSF could design a platform to improve medication adherence, influence behavior specific to certain diagnosis, and increase attendance at routine appointments, all through automated SMS.

FINAL WORD

James S Kahn, the Chair of the UCSF Research Administration Board remarks that, "We have demonstrated that integrating an enterprise level CRM application into a SQL HER; provides a novel environment that is use ful for creating an easily monitored system for automating texting to patients and can be used for research. The SMS messages required a return response and that necessitated the ability to associate a single message with a single response and involved a technology layer enabling any mobile device to use SMS and integrate into the CRM business process. We demonstrate that the return of messages were easily classified and automated.

We further demonstrate that automatic associations of a variety of medical diagnosis with lifestyle supportive message are feasible and will likely be a powerful tool to assist patients with a variety of common tasks such as medication adherence, lifestyle and behavior modifications, and appointment reminders."

Kahn continues, "The project demonstrated that a significant number of

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ABOVE
50%

"Response rates were above 50% for medication adherence reminders & for messages regarding diagnosis advice"

participants were able to be engaged by the CRM & SMS system and their participation was unusually high as evidence by the response rate that was above 50% for medication adherence reminders and for messages regarding diagnosis advice, This was true for a wide range of diagnosis including HIV/AIDS, depression, hypertension, hypercholesterolemia, and diabetes.

Kahn pointed out that Boomerang provided, "the opportunity to rapidly evaluate participants' responses to messages and respond nimbly to messages that failed to provide value to the participants; is of particular importance for actively engaging patients with their health care enterprise." In this particular medical case the synergy between SMS API's and a CRM platform had measurable results, and improved health outcomes was a recognizable consequence of this form of interaction. In the study it was "demonstrated that the technology is available to automate specifically designed messages to improve medication adherence, influence behavior associated with specific diagnosis, and increase attendance at regularly scheduled appointments."

Proving the point that Boomerang is continuing to transform the dynamics of patient interaction; increasing efficiency and continually delivering results.

Boomerang is a digital communications company. Our product range is the result of years of experience developing and supplying communications solutions to corporates and SMEs. Patented in 23 countries around the World, the technology used in our services and products is unique, and addresses many of the problems inherent in business communication today.

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