UCSF Medical Center develops CareWeb
Next generation messaging platform, powered by MuleSoft & Salesforce

Over the past year, UCSF'S Medicine Service has transitioned from a legacy pager-based solution to CareWeb Messenger, a revolutionary approach to patient care team collaboration that both improves patient outcomes and lowers operational costs. At the core of this solution is Salesforce 1 Platform, which enables communication between UCSF Medical Center staff and MuleSoft's Anypoint™ Platform, which seamlessly connects on-premise, cloud and mobile applications in a highly available and HIPAA-compliant environment.

The Challenge

UCSF Medical Center is among the nation's leading academic medical centers, with more than 750,000 patient visits and 40,000 admissions each year.

To ensure close communication between the 8,000 UCSF Medical Center staff members who support patient care, the Medical Center was previously using a homegrown paging system. The system was robust, but it had its drawbacks. Communication was one-way and text-based, requiring doctors to call back for additional information, slowing the flow of information and response to patients. It was difficult to coordinate across care teams as messages were not saved for future reference. Finally, team members had to carry a pager around with them in addition to their mobile devices, which was cumbersome and expensive.

"Our staff were being asked to use technology that was more than 30 years old," said Dr. Raman Khanna, MD, a faculty member in the UCSF Medical Center Department of Hospital Medicine and team lead for CareWeb. "We knew there had to be a better way."

The Solution: CareWeb Messenger built on Salesforce 1 Platform and MuleSoft Anypoint Platform

Using Salesforce and MuleSoft, UCSF Medical Center developed CareWeb Messenger, a next generation messaging platform, which securely integrates patient information across key systems.

In order to build CareWeb Messenger, UCSF Medical Center needed to connect the Epic EMR to non-clinical systems. They also needed a place to store and access patient information and messages being sent between UCSF Medical Center staff. They selected Salesforce to provide them with a single view of the communications about the patient and test results. Salesforce also enabled communication between patients and their attending doctors and nurses. This revolutionary approach to patient care messaging combines aspects of social networking sites like Twitter and Facebook, in a safe, secure, and HIPAA-compliant environment.

Company profile:

- Headquarters: San Francisco, CA
- Industry: Healthcare
- WebSite: http://www.ucsf.edu/
- MuleSoft Partner: Salesforce Website: http://www.salesforce.com/

Challenge overview

- The highest quality of patient care requires real-time collaboration among the care team
- UCSF'S Medical Center existing solution was legacy pager technology, which resulted in disjointed, one-to-one messages among the organization's 8,000 staff members
- UCSF Medical Center needed a two-way HIPAA compliant platform that unified communication across the entire care team

> **We chose to partner with MuleSoft because of its ability to connect clinical and non-clinical systems, both on-premise and in the cloud," said Dr. Blum. "Anypoint platform allows us to connect Epic, Salesforce.com and mobile and paging systems into one seamless solution."**

- Michael Blum, MD, Chief Medical Information Officer & director of the UCSF Medical Center for Digital Health Innovation.

CareWeb Messenger now works as a paging system for UCSF Medical Center staff across web and mobile platforms. CareWeb Messenger tags all messages to the sender, recipient and patient and stores this information, both text and images, under the patient account. Multiple threading and indexing of messages enables the care team to see, in one place, all messages that have been exchanged. Since Salesforce meets all patient health information standards, UCSF Medical Center is able to collaborate around this patient data in a HIPAA-compliant environment.

"We've talked about patient-centered care for decades but didn't have the systems to do this," said Michael Blum, MD, Chief Medical Information Officer at UCSF Medical Center and director of the UCSF Medical Center for Digital Health Innovation. "Salesforce's platform of engagement enables us to make our healthcare communications social, mobile and built around the patient so we can give them the best care possible."

In order to provide a single view of the patient, it was necessary to integrate data from a number of different systems, both on-premises and in the cloud. MuleSoft's Anypoint Platform was able to meet UCSF'S Medical Center integration needs with a hybrid approach, connecting to on-premise and cloud applications, within UCSF'S Medical Center secure environment.

"MuleSoft's Anypoint Platform let us configure integrations graphically, which made our system easy to setup and maintain" said Ed Martin, IT Director at UCSF Medical Center. Anypoint Platform ensures absolute data integrity and security. And above all, it is highly available and scalable.

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The Results

Following a successful pilot implementation in 2012, UCSF Medical Center is now rolling out the CareWeb Messenger platform across the entire hospital.

"The solution we have developed together has made a tremendous difference to how our patient care teams interact with one another," concluded Dr. Khanna. "Increasing the flow of rich information in real time will ultimately improve patient outcomes."

"UCSF is a great example of how Salesforce's platform of engagement can help companies innovate and better serve their customer, especially in the healthcare industry," said Todd Pierce, Global Head of Healthcare and Life Sciences Industry Business Unit, at Salesforce. "We look forward to partnering with UCSF and MuleSoft to share this solution with additional health service providers across the country."

Solution

- Built a next generation searchable communication platform on Salesforce

- Connected patient data in one location using MuleSoft

- Increased operational efficiency and reduced costs by eliminating the existing paging solution

Benefits

- Drastically improved and increased communication among 300 UCSF'S Medical Center staff to over 3,000 messages per month

- Care teams benefited from a single view of the patient by using MuleSoft to connect UCSF'S Medical Center Epic EMR, Salesforce, mobile and communications platform in a short amount of time

- Salesforce enabled HIPAA compliance with tighter management of patient data

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-Dr. Raman Khanna, team lead for CareWeb.