



The Computerworld Honors Program

Honoring those who use Information Technology to benefit society

Final Copy of Case Study

Status:

Laureate

Year:

2013

Organization Name:

TIBCO Software Inc.

Organization URL:

<http://www.tibco.com/>

Project Name:

Sisters of Mercy Improves Chronic Care with TIBCO

Please select the category in which you are submitting your entry:

Philanthropy

Please provide an overview of the nominated project. Describe the problem it was intended to solve, the technology or approach used, how it was innovative and any technical or other challenges that had to be overcome for successful implementation and adoption. (In 300 words or less.)

Using standard biomedical equipment to monitor intensive-care patients, Sisters of Mercy optimizes care by beaming vital signs from ICU patients throughout its organization to remote systems and monitors across its network including its medical hub in St. Louis in order to leverage limited staff and provide better care. There was a time when ICU vital signs were transmitted no further than the local nursing station. With TIBCO-enabled remote monitoring, patients can be tracked in real time by clinicians physically located anywhere within Sisters of Mercy's health system. Sisters of Mercy also unified electronic patient records, creating a single snapshot of a patient's entire medical history. Enriched with contextual data such as demographic information, dietary issues, current medications, and

key findings from all prior visits, their EHR enables clinicians to deliver better treatment and stronger diagnoses. "The best health systems today leverage their collective expertise not just to care for the patient, but to help the patient take care of himself," says John Conroy, Director of Application Development, Sisters of Mercy Health System. TIBCO has helped Sisters of Mercy meet this new imperative.

When was this project implemented or last updated? (Please specify month and year.) Has it incorporated new technologies and/or other innovations since its initial deployment? (In 300 words or less.)

This project was implemented in December 2006. Since it's initial deployment, Sisters of Mercy has a system that monitors every patient for sepsis by seeing every piece of information immediately, no matter where it happens across all of their facilities. They watch heart rate, blood pressure, temperature, demographic background, treatment condition, and progress. It is around 3,000 pieces of information per second that has to be pushed, pulled, digested, pattern matched and watched for temporal (time-sensitive) trends. When the system spots a negative trend, they dispatch doctors and nurses immediately as sepsis can only be treated and the patient saved by immediate action (also in combination). Even after the alarms are shut off, they look at what happened and constantly update the rules that drive the system, eventually getting better results. As a result, TIBCO has helped Sisters of Mercy reduce the length of stay for sepsis by 3.3 days, which is over 500K worth of cost of care. This is really about Big Data saving lives.

Is implementation of the project complete? If no, please describe the project's phases and which phase the project is now in. (In 300 words or less.)

Implementation of the project is not complete. Next up for Sisters of Mercy: home health monitoring technology essential to helping patients participate in their own care. Says John Conroy, Director of Application Development: "Our next step is to hook home-monitoring devices to our network through TIBCO EMS. Patients connected to these devices will be 'seen' by our staff even as they sit in their living rooms."

Please provide at least one example of how the technology project has benefited a specific individual or organization. Feel free to include personal quotes from individuals who have directly benefited from the work. (In 300 words or less.)

With TIBCO's help, Sisters of Mercy is identifying an average of 200 patients monthly in need of immediate, life-saving intervention. "We'd be stuck in the past



without the technology to integrate our network, enrich data and circulate it in real time. TIBCO has provided that, along with the knowledge transfer to get it right. Its professionals went above and beyond to support me and my team." John Conroy, Director of Application Development, Sisters of Mercy Health System.

Would this project be considered an innovation, a best practice or other notable advancement that could be adopted by or tailored for other organizations and uses? If yes, please describe that here. (In 300 words or less.)

This project would be considered all three. It's certainly innovative and a best practice, as well as a notable advancement that other healthcare systems can adopt or tailor for their organization's own uses. Utilizing the power of a company's technology, such as TIBCO, can help a hospital or healthcare system like Sisters of Mercy Health System to enable remote monitoring so that their ICU patients can be tracked by clinicians physically located anywhere within their network. Electronic patient records could be unified, creating a single snapshot of a patient's entire medical history. Enriched with contextual data such as demographic information, dietary issues, current medications, and key findings from all prior visits, their EHR enables clinicians to deliver better treatment and stronger diagnoses. New capacities to accelerate and strengthen patient care are critical and essential, and are not lost on the providers' physicians, nurses, lab technicians and others who rely on enriched patient data pushed in real time. For example, doctors could see lab results within a second, complete blood counts, blood types, glucose readings and much more all from disparate labs.

If there are any other details that the judges should know about this project, please note them here. (In 300 words or less.)

As a result of working with TIBCO, Sisters of Mercy Healthcare, with 26 hospitals, hundreds of clinics, 1,200 physicians and 36,000 staff members, is now an integrated network able to leverage its collective strength on behalf of each patient. "TIBCO is at the heart of it," says John Conroy, Director of Application Development, Sisters of Mercy Health System. "With patient information taken at admission and from histories, we publish common-information-model messages so that all downstream subscribers can use them to tailor patient care." Among these subscribers: the hospital dietician, ever vigilant for food allergies. "We go to great lengths to care for our patients," says Mr. Conroy. "The last thing we want to do is serve a peanut butter and jelly sandwich to someone who's allergic to peanuts." TIBCO has helped Sisters of Mercy meet this new imperative. Says Mr. Conroy: "We'd be stuck in the past without the technology to integrate our network, enrich data and circulate it in real time. TIBCO has provided that, along with the knowledge transfer to get it right. Its professionals went above and beyond to support me and my team."