Mobile Puts Patients First

Recent decades of medical advances now help people live longer—although with more complex health conditions, requiring more urgent care—than ever before. Several years ago, The Ottawa Hospital determined that its traditional workflow process could not keep pace with these advances. Addressing that reality meant transforming itself into a mobilefirst enterprise.

As one of the largest academic teaching hospitals in Ottawa, Ontario, its goals included achieving a level of high-quality patient care that would rank it among the top 10 percent of North American academic hospitals. But healthcare professionals found that the time they spent searching for information and resources within the hospital's servers was cutting into the time they spent delivering bedside care. "One could argue that healthcare was delivered more effectively 25 or 30 years ago," Dale Potter, the hospital's SVP–Strategy and Transformation, recently remarked. "When we introduced technology, we disrupted workflow."

With an occupancy rate sometimes exceeding 110 percent, and with patients whose complex medical conditions demanded urgent attention from several departments at once, the hospital needed to implement process changes to manage its care.

To meet these challenges, the hospital made itself an early adopter of mobile technology, building a clinical mobile app (CMA) that put mobility at the center of its process infrastructure. For multiple departments to collaborate and communicate, the hospital needed a nimble wireless platform driving all of the hospital's workflows and tied directly to patient outcomes—and one that could integrate seamlessly with its existing infrastructure. The hospital built that platform using IBM technology, including IBM Blueworks Live and IBM Aruba Networks.

This initiative coincided with the advent of current tablet computers, which became a key component of the hospital's mobility infrastructure. When the hospital launched a tablet-based Electronic Medical Record app and extended its reach with a Care Process Management app, many closed-loop transactions became shared social-business interactions.

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>
> – Glen Geiger, The Ottawa Hospital's chief medical information officer

The effects of building on its first CMA to create a tablet-based mobility infrastructure powered by IBM technology have been immediate and lasting.

- Process standardization. In an industry widely seen as lacking standardized processes, the hospital implemented IBM Blueworks Live to let unit managers create, map, manage and share their procedures and process flows, so they can manage accountability and identify and clear bottlenecks. Both admissions and discharges are now streamlined.

- Customer care. The process permits greater personal contact between physicians and patients. Physicians attending to more patients personally, with tablet devices, now spot life-threatening emergencies that they couldn't with remote administration procedures.

- Social networking. A shared awareness of the "circle of care"— all the physicians and other roles attending to each patient— are now accessible by tablet and represented graphically, so physicians can coordinate information and service better by exchanging patient-related notifications and instant messages.

- Security. Using IBM Tivoli Access Manager and Identity Manager answered all security concerns about the tablet-based platform. Tivoli stores all professional, personal and confidential information in the hospital's wirelessly networked private cloud, instead of on each tablet, and the data cache is cleared after every use.

- Predictive analytics. The IBM system will greatly streamline the hospital's exchange of data, permitting more useful predictive analytics, such as how time of year, time of day, and weather conditions can affect demand on the hospital and help it allocate its resources, potentially eliminating excess capacity. Better access to data will also improve evidence-based medicine, guided more accurately by empirical data rather than professional opinion.

- Widespread adoption. The Ottawa Hospital's physicians, while not required to use the CMA, have embraced it, rapidly transforming the hospital's institutional behaviors as a result.

- Improved service and patient outcomes. More personal involvement from physicians means shorter hospital stays, lowering the hospital's costs, and discharges tied more closely to the accuracy of outcomes than to fast timing.

Solutions

- IBM® Blueworks Live™
- IBM Business Process Manager
- IBM WebSphere® Message Broker
- IBM WebSphere Operational
  Decision Management

Although the IBM platform was launched for one mobile operating system on one type of tablet, The Ottawa Hospital is evolving its mobility platform to support various mobile devices and operating systems.

Implementing IBM's Social, Cloud, Big Data & Analytics and mobile process-management technology has greatly improved the The Ottawa Hospital's user experience. Patients now spend less time at the hospital, and the quality of that time has improved, with greater involvement from physicians who spend less time thinking about paperwork and procedures.

"I have never had care process improvement initiatives that were as positive as this one—the stakeholders were riveted to our meetings," Glen Geiger, The Ottawa Hospital's chief medical information officer, recently said. "Personally, I am going to spend more time focusing on the right things and less time focusing on the mechanics, the bureaucracy, the paperwork."

For more information

To learn more about how IBM mobile can help you improve process management, please contact your IBM marketing representative or IBM Business Partner, or visit the following website: **ibm.com**/mobilefirst

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