Increasing Efficiency, Improving Outcomes and Working Smarter in Healthcare.

Connecting patients, healthcare organizations and the information they need

Working smarter in healthcare: Optimizing care and performance

There is a new breed of patient in the healthcare marketplace today. These patients expect to interact with their doctors online. They expect their care to be coordinated seamlessly among all of their caregivers. And they expect better-quality care at lower costs. In fact, these patients are so demanding, they are sometimes referred to by another name: customers.

For nearly two decades now, even the most conservative industries around the world have been undergoing radical transformation, taking advantage of the connectivity, efficiency and technological capabilities of the Internet age. From banking to retail to manufacturing, one business after another has embraced the power of this change, optimizing underlying operations, improving their competitive positions and refocusing their efforts on customers. And in so doing, they have raised the expectations of consumers in virtually every marketplace.

Yet somehow, the healthcare industry has managed to resist this change. Even as the world moved on without them, many care organizations remained stuck in paper-based ways of doing business, resulting in rising costs, limited access and increasing medical errors. In the United States alone, as much as US$850 billion is wasted each year on administrative inefficiencies, redundant treatments, mistakes and fraud.[1] And in some countries, healthcare costs are growing twice as fast as inflation.

But change is finally coming to healthcare. Driven by the new expectations of customers and unsustainable cost trajectory, healthcare organizations are now in the early throes of a modernization process that will reshape this global industry. Online preventive care, electronic prescriptions, optimized staff rostering and patient scheduling, remote patient monitoring, and secure digital health records are just of few of the tools and techniques used by these organizations. Technologies are finally enabling more collaborative, agile and integrated healthcare. They are getting the right information to the right people at the right time. They are allowing doctors to focus on the patient, rather than fighting the system. And they are laying the foundations for cost-effective, accurate and smarter healthcare.

Today's healthcare

Healthcare systems today are undeniably complicated. They consist of vast networks of physicians, patients, pharmacies, insurers, hospitals, governments and device companies. And they are exchanging millions of diagnoses, medical images, prescriptions, forms and other documents every day.

But the problem with most healthcare systems is not that they are complex. Many complex systems in our world run with stunning efficiency. No, the problem with most healthcare systems is that they aren't systems at all. That is to say there is limited coordination of data or services. Incentives are misaligned. Diagnoses are made in isolation. Information lives on islands.

It's no wonder then that waste, high medical error rates and fraud plague the industry. Nearly one out of every five medical tests is repeated unnecessarily because the results simply weren't available at the point of care.[2] An estimated 1.5 million people are harmed every year from preventable errors in prescribing and administering medications in the United States alone.[3] And of the US$5 trillion spent on healthcare annually in the United States, as much as 10 percent is attributed to fraudulent billing based on FBI estimates.[4]

All of which has the healthcare industry on the verge of radical change. While costs continue to rise, global economic pressure is driving customers to alternative forms of medicine or, more dangerously, to skip treatment altogether. And as governments step in to stop the bleeding, very few care organizations say they are prepared for healthcare reform and the new economic landscape.

Smarter healthcare

Slowly, in far-flung pockets of the healthcare world, the early signs of a smarter industry are starting to emerge. Forward-thinking care delivery organizations are not waiting for the government to fix a broken system. They are making the investments to improve quality, outcomes and efficiency. They have oriented their practices around the patient. They are the vanguards of smarter healthcare.

These are not future scenarios. It's happening today: doctors collaborating in real time with teams of specialists from around the world; medical records following patients, accumulating an ongoing tally of tests, diagnoses, prescriptions and treatments; rules-based medication monitoring to prevent injury; and hospitals optimizing work schedules and tracking patient progress through the use of integrated systems and real-time location technology.

The same technologies that have revolutionized the business world are finally going to work in healthcare, facilitating collaboration between coworkers, transforming operations and delivering better care as a result. In fact, patients of top-performing hospitals, on the leading edge of smarter healthcare, reduce their chances of experiencing one or more medical errors by nearly half.

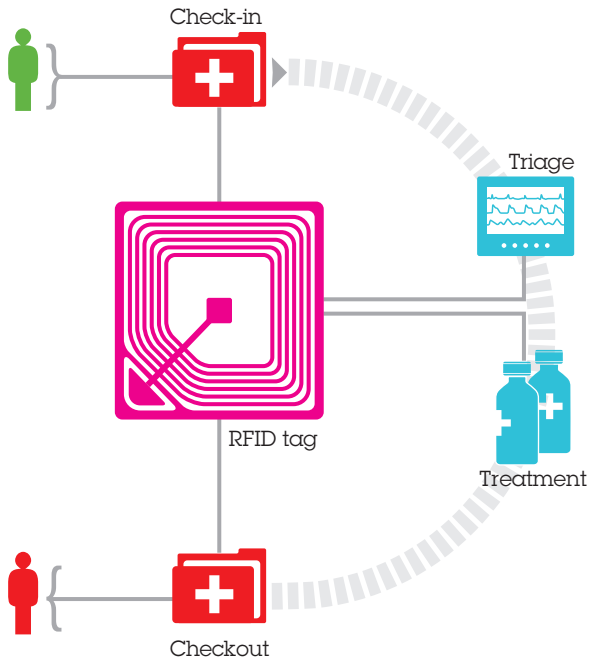
On the following pages, you'll see several real-world examples of how the promise of smarter healthcare is being delivered on today.

Greater efficiency

German medical school

Already a world-class medical school and treatment facility, a medical school in Germany wanted to streamline its process of moving patients from admission to discharge. To accomplish this, the school created a comprehensive patient and asset tracking solution using radio frequency identification (RFID) tags. Patients checking in to the facility are issued bracelets containing an RFID tag with all the relevant patient data and the urgency of their medical condition. They are then automatically triaged and tracked at every stage of their treatment throughout the hospital system. The system helps doctors locate and prioritize patients as well as reduces wait times and cuts costs by tracking medical assets.

Figure 1: The patient tracking system uses RFID bracelets to speed emergency room operations.



Better outcomes
Western North Carolina Health Network

Nearly all hospitals anticipate the day when patient health records are electronic and easily exchangeable between doctors in various locations. Western North Carolina Health Network (WNCHN), a coalition of 16 regional hospitals, country health departments and other healthcare organizations, actually made it happen. Using a unique system called Data Link, organizations are able to view and update electronic health records practically anytime, anywhere within the network. And the system uses an innovative "virtual" records system that uses the data from hospitals' existing records systems instead of creating a new, centralized system. As a result, WNCHN cut down on redundant testing and reduced the time to retrieve patient records from 30 minutes to mere seconds. But most important, it improved patient care by reducing medical errors and eliminating unnecessary treatments.

Figure 2: A network of 16 hospitals shares electronic health records.

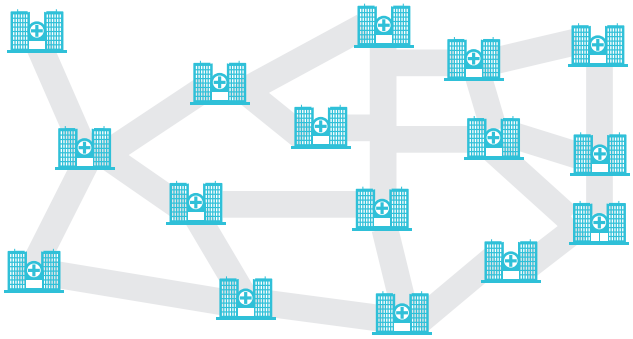
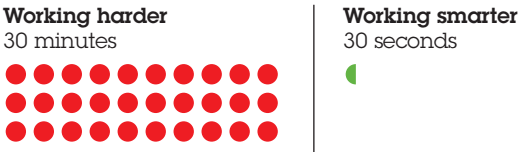


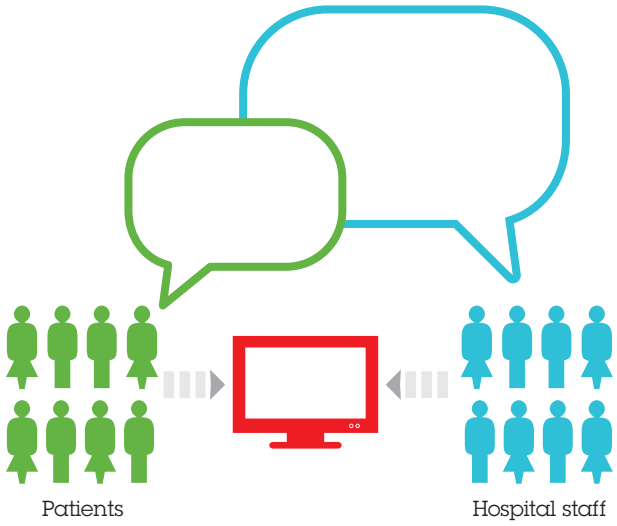
Figure 3: The time to retrieve patient records



Smarter healthcare
Duke University Health System

Patient-centered care seems like it should be an obvious goal of any healthcare organization. Yet many of them struggle with execution. Duke Medicine, a leading university, medical research center and care provider, cracked the code. Aiming to integrate people, processes and technology across operations, Duke launched a powerful patient Web portal called HealthView. The portal provides a single, security-rich information access point for patients, allowing them to access their health records and lab results, make appointments, view and pay their bills, and update information online. The site has 150,000 registered patients who access more than 150,000 lab results and make more than US$1 million in payments a month. HealthView has yielded substantial benefits, including a major reduction in Duke's no-show rate. And it has returned the focus of doctors and administrators to their ultimate goal: healthier patients.

Figure 4: A powerful Web portal brings together patients, doctors and administrators online.



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Getting started

Every day, healthcare organizations are making progress toward increasing efficiency, improving outcomes and delivering smarter healthcare. Those who don't are likely to be left behind. To find out if your organization is on the path to smarter healthcare, begin by asking some hard questions:

Do our doctors have access to the right patient and drug information at the right time?

Do we collaborate, not just cooperate, with other doctors, our patients and the healthcare community?

Are our operational processes able to adapt and respond quickly to meet patient demands?

Is our medical information stuck in silos and underutilized across the organization?

Are we focused on the patient?

If you answer "no" to any of these questions, it may be time for you to call IBM. To learn more about smarter healthcare and to help us build a smarter planet one patient at a time, visit the healthcare section of:
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