HOW CUSTOMER EXPERIENCE IS TRANSFORMING HEALTHCARE (AND WILL CONTINUE TO INSPIRE CHANGE)

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As an industry, healthcare is not always quick to embrace emerging technologies. When the cost of failure amounts to much more than money, patient safety, trust and well-being must come first. However, healthcare technology is now poised for explosive growth as organizations seeking to enable better population health management and embrace preventative care take action to support new apps and devices on their own networks and platforms. Already, technology trends that drive improved care experiences, empower individuals and support smart aftercare are making their mark. Here, we explore several ways this is playing out across the industry.

IMPROVED CARE EXPERIENCES

COST SAVINGS & EFFICIENCY

It is a universally acknowledged truth that networked systems and smart technology can help organizations in healthcare dramatically cut costs. This is a particular draw in the United States where the on-average $18,000 cost to discharge a patient is **three times** that found in other developed countries.[1] It should come as no surprise then, that "IT investments increasingly emphasize connectivity and networked systems. Networking enables healthcare systems to lower costs while improving patient experiences and facilitating an advanced degree of care customization."[1]

> *"The average cost of patient discharge in the U.S. — $18,000 — is 3x the average found in other developed countries."*

Technology that can bring about the advent of streamlined experiences should be a welcome change for patients, for whom hospital time is almost synonymous with wait time. Navigant Research found that these devices deliver plenty of time savings with all those cost savings.[1] Scheduling, in particular, can be streamlined with utilization statistics that aid in the optimization of equipment use and prevention of over-scheduling. Similarly, Navigant posits that, "one of the greatest benefits is the ability to test and diagnose devices remotely." Connected devices that can signal when critical operational components are being depleted include such heavily used tools as lab test equipment, CT scanners and MRIs. This, Navigant finds, can help to reduce device downtime and breakdowns, "thus avoiding shutdown costs and patient rescheduling."[1]

PATIENT TRACKING & FLOW

Many experts point to tracking and navigation as key areas that can be impacted by technology. Philip Gerskovich, a leading thinker about IoT for business, believes that the greatest benefit of the Internet of Things (IoT) will be **improving the overall customer experience**. The potential of these devices on a strong and secure network unfolds in numerous ways, some expected, and others innovative. Gerskovitch told *SearchHealthIT* that even connecting medical devices will be less impactful than, "helping patients and visitors navigate hospitals and other healthcare settings." And in this sense, navigation isn't just limited to knowing where to go — though that's a plus in large facilities.

"The way the Internet of Things is going to impact healthcare is identifying people as they move around the hospital."[2]

Other experts and organizations agree with Gerskovich's take. In a demonstration for *SearchHealthIT*, Joel Cook, senior healthcare solutions director at Stanley Healthcare, explained a number of ways his customers use IoT devices in healthcare. Cook observed that his customers in hospitals with the proper network support and security tend to use their IoT technology for real-time location services. In this implementation, wheelchairs, defibrillators, infusion pumps, scales and other mobile, but frequently needed devices, are given badges for rapid location finding.[3]

Hospitals can use this system with staff and patients to create a real-time portrait of all the key players in a healthcare setting. Initially, this all sounds like a great means to boost productivity and efficiency, both of which influence the patient experience, but the implementation of this tactic on a larger scale creates the potential for systemic level impacts.

Cook also thinks healthcare technology can greatly improve patient flow. The idea is simple. With this information available, the various care providers around the hospital can monitor the action elsewhere and plan accordingly.

Cook explains it like this: Suppose you work in the post-anesthesia care unit (PACU) and you want to prepare for incoming patients. With connected devices, you could, "see what's going on in the ORs, where they are in the case, and can therefore interpret when people are going to arrive in PACU."[3] Now imagine this example extrapolated across the entire organization, and it becomes clear how this wealth of information could improve the patient experience in myriad ways.

SMART TECHNOLOGY & CARE

Other innovations are less broad in scope, but more immediately impactful for patients. For example, environmental monitoring tools can ensure body temperature is where it should be and can also ensure hand hygiene compliance is met — thereby helping to decrease the potential for hospital-acquired illnesses.[3] Meanwhile, some hospitals have begun implementing "smart beds," a measure with almost unrivaled impact for patients who spend much of their in-hospital time in bed. Smart beds can detect when they are occupied and when a patient is attempting to get up, which can reduce the risk of falls. The beds can also self-adjust for appropriate pressure and support without the intervention of a nurse.[4] One study, completed for BAM Labs® Smart Bed Technology®, showed an "85.4% decrease in new pressure ulcer development using Smart Bed Technology."[5]

Smart Bed Technology can decrease new pressure ulcer development by 85.4%[5]

The organization that is able to perfect these and other healthcare technology innovations would have a healthcare environment that can more effectively ease patient suffering. But, these advances can also make it easier for patients to take charge of their own care, and even decrease the chance that they would need to be hospitalized in the first place.
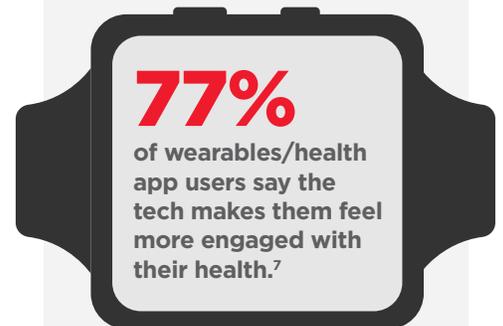
Case Study: Patient Rapid Response Center ▶
See how Avaya IP Office and Avaya Contact Center Select (ACCS) helped ENT and Allergy Associates reduce wait times in their Patient Rapid Response Center to 1-2 minutes.

Healthcare Technology By The Numbers

51% of healthcare IT leaders said their organization improved population health with IT tools[6]

77% of wearables/health app users say the tech makes them feel more engaged with their health.[7]

Approximately **80%** of physicians use smartphones in-hospital.[8]

EMPOWER INDIVIDUALS

The future of healthcare is now so entwined with connected health that the Office of the National Coordinator for Health Information Technology has drafted a Nationwide Interoperability Roadmap to outline "what needs to happen, by when, and by whom, to see that electronic health information is available when and where it matters most for those we are here to serve: the American people."[9] The roadmap charts a course to achieve these goals by 2024 and champions electronic health information as a means to empower consumers, among other aims.

> *"Members of the public are rapidly adopting technology, particularly mobile technology, to manage numerous aspects of their lives, including health and wellness. However, many of these innovative apps and online tools do not yet integrate electronic health information from the care delivery system. Electronic health information from the care delivery system should be easily accessible to individuals and empower them to become more active partners and participants in their health and care..."*

Empowering individuals is one of many ways connected health and the IoT can revolutionize healthcare and encourage personal investment in well-being and health management.

Similarly, some experts call for innovation in IT healthcare as a catalyst for distributed healthcare — an idea that suggests that the physical decentralization of healthcare services will enable better care, with greater patient satisfaction and greater efficiency.

"The core hospital environment is very good at providing intensive, highly specialized care for acute conditions, but is inefficient at managing preventative and chronic care. Accordingly, there is a growing trend to manage these care modalities outside of the traditional hospital-based environment."[10]

The potential also exists to take preventative care and aftercare measures outside brick-and-mortar infrastructures without sacrificing the quality of care.

> *Case Study: ProMedica ▸*
> *See how Avaya Fabric Connect is making life easier for crucial on-demand, full-service, urgent care centers.*

SMART AFTERCARE

Tech futurist Frank Palermo believes IoT wearables like the Apple Watch can revolutionize outpatient and post-care.

> *"The whole outpatient side of it is where it really gets interesting, with medication adherence. Most post-care follow-up is not really compliant. So the patient leaves the hospital: Are they doing what they're supposed to be doing? The device can be used as a way to either remind, schedule or track. There's a whole set of care management possibilities."* [11]

Palermo brings the potential of healthcare technology full circle. Any technology that could accurately monitor the progress of recovering or chronically ill patients, while also eliminating

Healthcare Technology By The Numbers

Healthcare IoT is expected to expand at a compound annual growth rate of **38.1%** through 2020.[12]

74% of healthcare IT leaders indicated that IT was a critical tool needed to enable their organization to achieve care coordination.[6]

90% of wearable/health app users said they would be open to sharing data from their devices and apps with healthcare providers.[7]

the need for some office appointments would be a welcome convenience for patients and caregivers alike. It's also been posited that the same smart technology that makes smart beds a boon to in-hospital care could be applied to a smart home medication dispenser that could ensure correct dosage and automatically upload data to the cloud if medication isn't taken or there are other indicators that call for the care team to be alerted.[4]

These opportunities, of course, are not limited specifically to post-stay care — or any piece of the healthcare puzzle on its own. As we see in the Office of the National Coordinator for Health Information Technology's roadmap, there is a strong belief that data and information will empower individuals to take a more involved role in their own health. Whether those measures are supported by wearable technologies, health tracking apps, telemedicine or other innovations, it will take a strong, secure healthcare provider network for patients to enjoy the full benefit of their efforts.

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CONCLUSION

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