

# Beyond the Wow Factor: Getting the Most Out of Disruptive Technologies

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# INTRODUCTION

In his 1997 book, "The Innovator's Dilemma," Clayton M. Christensen, a Harvard business school professor, defines a "disruptive technology" as one that displaces an established technology and shakes up an industry or creates a completely new industry.<sup>1</sup> Larry Downes and Paul Nunes updated this concept in their 2015 book "Big Bang Disruption," by explaining that innovations that are simultaneously, better, cheaper and more customized could now disrupt organizations and industries *very quickly*.<sup>2</sup>

While such fast-paced change seems commonplace in today's go-go world, many healthcare organizations have traditionally been more likely to stick to the slow-and-steady-wins-the-race disruption model, according to Rebecca Molesworth, Senior Director, Clinical Informatics and Analytics, Medecision. So, the big question is: As technological innovations continue to flood the market, will healthcare organizations adopt them at a pace that results in big-bang disruption or will they simply stick to the more measured approach that has historically been so common in the industry?

"Just because exciting, new technology exists doesn't mean that it will be immediately adopted. Many organizations find it hard to get extra funding that can be used for widespread experimentation, so healthcare organizations tend to hold back until they have some evidence that what they're going to try works. Sometimes, healthcare organizations don't like to be the first ones off the diving board because they can't afford a mistake," Molesworth says.

Simply consider the trajectory of electronic medical records (EMR) adoption in the healthcare industry. While undisputedly disruptive, EMR adoption proceeded at a painstakingly slow pace. EMRs were first introduced to the industry in the 1960s. But they weren't widely adopted until the government stepped in with \$36 billion in Meaningful Use incentive funds made available through the Health Information Technology for Economic and Clinical Health Act (HITECH) of 2009. It was only with this financial incentive in place that EMR adoption finally became commonplace, with 96% of hospitals and 87% of physician practices having implemented EMRs by 2015.<sup>3,4</sup>

"The government had to force physicians to pick up EMRs even though that technology had been around for a long time. They had to create and nurture the financial motivation for organizations to adopt EMRs because without the incentives it didn't make financial sense for healthcare organizations to spend significant amounts of money changing their organizations' behavior, with so little benefit to the individual physician," Molesworth says.

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# READY FOR MORE DISRUPTION?

While a plethora of other technologies are now available to healthcare organizations in this age of rapid innovation, the rate of adoption and subsequently disruption hinges upon healthcare organizations having the motivation to take the plunge.

"Many technologies have been around for a while. But they haven't really disrupted the industry yet because there has not been a compelling financial reason to adopt them. That's the piece that ultimately has to be there," Molesworth explains. "You've got to have a financial model that works. Healthcare organizations are not in the business of taking on financial risk because the technology is exciting, they want proof that it's going to make a difference to their business. So, the technologies that will truly disrupt the industry are the ones that make financial sense as well as innovate."

A couple of industry trends could provide the monetary motivation that healthcare organizations, including health insurers, need to move forward.

The transition from fee-for-service to value-based care models, for example, is creating demand for various technologies. In the fee-for-service world, healthcare organizations were reimbursed solely on the volume of services provided. Under increasingly common value-based care models, however, healthcare organizations are reimbursed based on the quality of services delivered and outcomes achieved as well. As such, healthcare organizations need to go beyond merely adopting technologies that will improve efficiencies and move toward those that can provide the ability to improve care outcomes and the patient experience. Clinical analytics and data integration solutions, for example, could help health insurers and providers improve quality and meet value-based care challenges, according to the 8th Annual Industry Pulse Report from Change Healthcare and the HealthCare Executive Group.<sup>5</sup>



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The move toward consumer-centered care is also providing organizations with the financial incentive to adopt a variety of technologies. The need to engage consumers in their healthcare is becoming a non-negotiable imperative, and consumer demands, experience and expectations have a direct impact on that engagement. As patients become more active and responsible for managing an increasing volume of health information, including their medical history, lab results and medications, new consumer health information technology (health IT) applications are being developed that enable patients to manage, share and control their health information electronically and to assume a more active role in the management of their health, according to the Agency for Healthcare Research and Quality.<sup>6</sup>

"Regardless of whatever policies, technologies and processes we have in place, if it's not going to make it better for the consumer, organizations will fail. The consumer needs to be a center of everything that we're doing, everything we're thinking about," says Samuel Abraham, Vice President, Product Solutions at Medecision.

## DOING THE PREP WORK

While industry trends are creating the need for disruptive technologies, healthcare organizations need to be ready to handle the change as well.

Perhaps most important, healthcare organizational leaders need to tie technology adoption to business challenges. "Healthcare organizations should not simply implement technology for the sake of implementing technology. Health insurers and other healthcare organizations need to make a clear connection between the problems that they are trying to solve and the technologies they are adopting. They can't just implement solutions because they are the next best thing," Abraham says.

In addition, healthcare organizations need to put proactive change management processes and strong governance initiatives in place. A successful change management initiative includes several components such as a change readiness evaluation, change management strategy, change management plan, and change management delivery and re-evaluation.<sup>7</sup> And, good governance allows for the oversight of a healthcare organization's IT resources and IT investments by involving key players in the project approval process.<sup>8</sup>



# POTENTIALLY UNSETTLING TECHNOLOGIES

As healthcare industry trends pave the way for the adoption of innovative technologies and healthcare organizations ready themselves for change, a variety of solutions are sitting on the precipice of disruption. Various market research, as well as a new SourceMedia survey of 129 health insurance company leaders, sheds light on how likely and how quickly the following technologies could disrupt the healthcare industry and specifically how fast such change could be coming to health insurers:

**Telemedicine/Virtual Care:** The global telemedicine market generated \$21.5 billion revenue in 2017 and is predicted to progress at a rate of 14.8% annually from 2018–2023, according to a report from Prescient & Strategic Intelligence. Increasing prevalence of chronic and lifestyle associated diseases, and surging demand for selfcare in remote locations are just a few of the factors driving the market growth.<sup>9</sup>

According to the SourceMedia study, 62% of health insurers are currently funding telemedicine initiatives. In addition, more than three-quarters of respondents noted that telemedicine is effective at reducing costs at their organizations and 87% indicated that it is effective in improving member care.

"Telemedicine technologies have been around for quite some time. Healthcare organizations are finally starting to adopt them because they are recognizing the value of preventing patients from having to see the doctor for conditions that can easily be diagnosed, treated and managed remotely," Molesworth explains.

Whether or not telemedicine will reach the point where it can be considered a "disruptive" force, however, remains to be seen. "There are certain situations in which people have to see the doctor in person. So, I don't believe that telemedicine will replace how medical care is delivered entirely. But, I do believe it will add new opportunities in the market, create more efficiencies and add tons of value," she adds.

**Fast Healthcare Interoperability Resources:** Commonly referred to as FHIR, this standard describes data formats and elements (known as "resources") and an application programming interface (API) for exchanging electronic health records. According to the SourceMedia survey, 21% of health insurers surveyed said that their organizations are currently using FHIR technology. However, adoption is expected to increase quickly — as 45% of respondents expect their organizations to adopt the FHR within the next year. It is not surprising that this move toward FHIR is happening, as only 6% of respondents said their organizations are "extremely effective" at sharing data with providers — even though such sharing is a key factor in value-based care success. What's more, a proposed rule from the Office of the National Coordinator for Health IT could spur additional adoption by making FHIR a data-sharing requirement.

"Getting a holistic view of the consumer is critical. Because the system is so disconnected, as consumers move through the healthcare system their information is stored in various silos and resides in different parts of the healthcare system. One thing that's critical for health plans to streamline the care process and improve care outcomes is to make sure they can get a holistic view of everything that is happening with that consumer," Abraham notes.

**Artificial Intelligence/Machine Learning:** The market for healthcare artificial intelligence tools is expected to surpass \$34 billion by the middle of the 2020s, driven largely by a growing desire to automate tasks and harness deeper insights into clinical and financial issues, according to a report from market research company Tractica.<sup>10</sup>

Respondents who participated in the SourceMedia study indicated that artificial intelligence and machine learning are already widely adopted and being used for a variety of purposes at their health plans. In fact, 84% of respondents indicated that they are using artificial intelligence/machine learning. Of these, 66% are using AI/ML to identify members at risk of complications or re-hospitalizations; 53% are using the technologies to stratify members for care or case management; 50% to identify provider treatment trends; and 49% to manage/research claims for potential provider improvements.

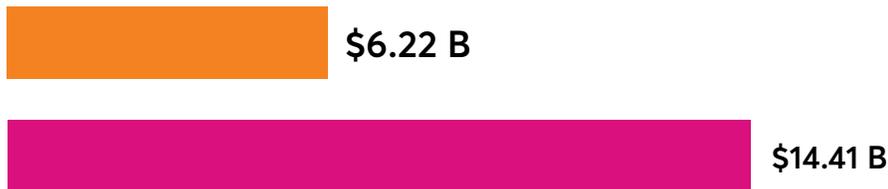
"Traditional methods of looking at retrospective data have yielded some value, but data analytics, artificial intelligence and machine learning are critical when trying to specifically determine which members to engage with. The last thing members need from a health plan is a notification or educational content that is not relevant to them. It's absolutely critical to identify which cohorts of patients need to be targeted for specific engagements, and what channels need to be used to engage with that cohort," Abraham says.

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## The wearable medical devices market

Expected to grow at an annual rate of 18.3%

● 2017 ● 2022



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**Wearable Technology:** The wearable medical devices market is expected to grow at an annual rate of 18.3%, and reach \$14.41 billion in 2022, up from just \$6.22 billion in 2017. The growth of the market is attributed to the technological advances in medical devices, increasing penetration of smartphones and growing number of smartphone-based healthcare apps compatible with wearable devices, and increasing awareness about physical fitness.<sup>11</sup>

According to the SourceMedia study, 32% of health insurers cover the cost of wearable technology for members, while 46% said their organizations provide discounts/incentives for members who utilize wearable technology.

One of the clients that Medecision works with is providing therapeutic vests to pediatric members who suffer from cystic fibrosis and have difficulties breathing. "The young member can wear this vest at home, and it helps to disrupt the fluids so they don't build up in their chest. The care managers are also able to digitally monitor the member's breathing to determine if additional interventions are needed. While they are getting good results so far, they are only using the vests in a small, piloted way. It is this type of experimentation, though, that will slowly change the paradigm of where care can happen and how the plan can positively impact members and their experience." Molesworth says.

While telemedicine, FHIR, artificial intelligence/machine learning and wearable technologies could all potentially disrupt the healthcare industry in general, they are not the only technologies that could have a significant impact in this age of innovation. Internet of Things solutions, genomics, blockchain, edge computing, 3-D printing and a host of other innovations — some known and some yet to be discovered — could potentially disrupt healthcare as well.

"Disruption can be a great thing for health insurance organizations. Whether it happens quickly or slowly is not as important as how prepared healthcare organizations are to make the most of the various innovations that are available in the market," Abraham concludes. "By tying the adoption of innovative technologies to business goals and then taking a strategic approach to the implementation and utilization of these innovations, healthcare organizations can ensure that technologies are disrupting in the best way possible. That is, they can ensure that these innovations are not just bringing change but bringing the change that results in radically improved care, enhanced efficiencies and reduced costs."



## BY THE NUMBERS



### Telemedicine/ Virtual Care

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Source: SourceMedia Survey, 2019



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Source: Markets and Markets

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## About Medecision

At Medecision, we believe in a liberated healthcare system where people, plans and care teams engage in driving the best health outcomes in a seamless, interconnected way. That's why we invest every year in delivering a better Aerial™ experience to our customers and the people they serve. With more than 30 years of business success under our belt, and more than 50 million lives under Aerial management, we know what it takes to power success for our clients — more than 85 of the leading health plans and systems in the US. With our professional services division, Aveus, we tackle complex challenges in our pursuit to drive the best consumer experience. Learn more about our mission, vision, team and achievements by visiting [medecision.com](https://www.medecision.com).