

By Kim Ribbink



New Players and Old DISRUPTING THE INDUSTRY

PharmaVOICE's November/December 2015 Healthcare Disrupters article covered some of the nontraditional players entering the healthcare industry.

Now, we explore the latest developments and alliances and what these mean to the industry at large.

Disruption has become the new normal for the healthcare and life-sciences industry. And while several companies — industry incumbents, such as payers and providers — have been pursuing strategies to transform the industry and create greater efficiencies, the dynamic changed with the entry of tech giants and other newcomers to the industry.

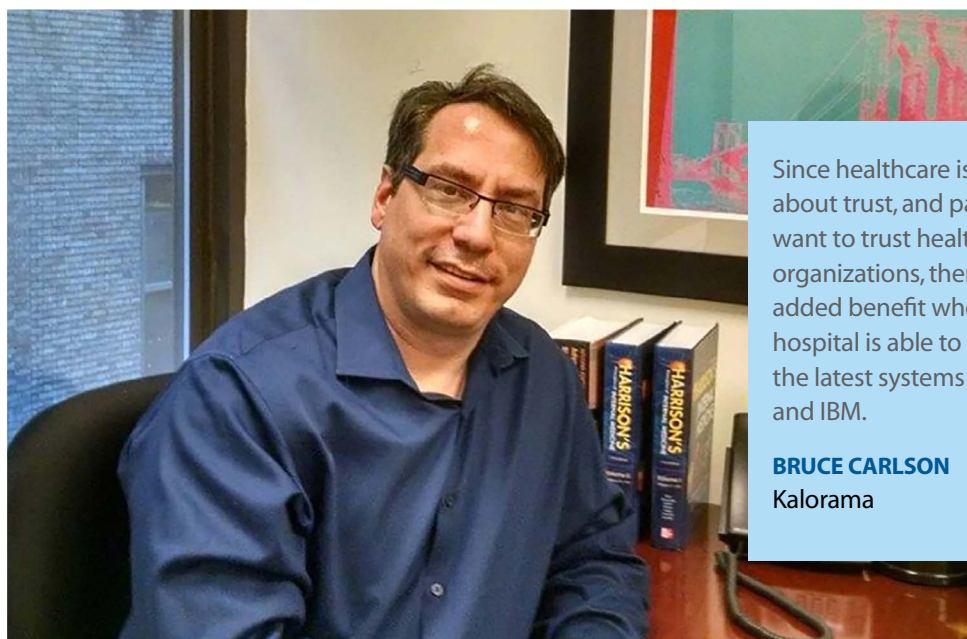
Healthcare has become an increasingly attractive field for nontraditional players to enter in recent years due to the sheer size of the market — representing 17.9% of the United States' GDP — and the growing dissatisfac-

tion with the industry, says ZS Managing Principal Paul Darling.

Companies such as Google, Apple, IBM, and Microsoft — to name a few — have been shaking up the industry with a variety of initiatives. CityBlock Health, which was spun out of Alphabet's Sidewalk Labs in October 2017, was developed with the objective of revolutionizing health in urban communities by tackling health disparity in lower socio-economic urban communities. Alphabet is the parent company of Google, which has been making significant investments in health and the life-sciences in recent years.

Cognitive computing is having a profound impact on the healthcare and life-sciences industries as well, with tech giants such as IBM — through Watson Health — and Microsoft — as Microsoft Cognitive Services — playing a central role.

"While it's a very small slice of all U.S. patients, 147,000 patients now have their care plans managed with the assistance of IBM Watson Care Manager," says Bruce Carlson, publisher of Kalorama Information. "IBM already offers services to take the data a hospital generates and use it in clinical protocols. An example is IBM's work with Children's



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BRUCE CARLSON
Kalorama

data, healthcare industry players can apply tech giants' strategies of integrating into everyday patients' lives to modify behavior and shift healthcare from a model of treating sickness to a model of reinforcing wellness," Mr. Darling says. He notes that as employers Amazon, Berkshire Hathaway, and JP Morgan can create direct incentives for their employees to engage in wellness, such as offering incentives for regular use of a fitness tracker.

"Given Amazon's ability to segment consumer-based behavior, the new points-of-care model could take place inside the workplace or in the patient's own home through telehealth platforms and could take advantage of detailed employee behavior via tracking or home purchasing systems such as Alexa," he adds.

Mr. Carlson says the immediate outcome of the Amazon, Berkshire Hathaway, JP Morgan initiative will be to create a healthcare pool that makes costs transparent and allows for purchases to be shared. But there's likely to be more to the story.

"There also could be direct purchasing of some medical items, and even higher-level healthcare products," he says. "It's not hard to speculate about other developments. Maybe Amazon's Whole Foods could open retail clinics or Amazon Flex could provide immediate delivery of certain prescriptions."

Apple has been a big innovator in healthcare, for example, through wellness apps and more recently the Apple Watch that lets users track existing health metrics and share that data with their physicians, Mr. Carlson says.

However, he notes that healthcare had been changing even before the entry of tech giants. Changes have included combinations in terms of healthcare systems — HCA, Tenet, Community, NY Presbyterian, Sutter Mayo — joining university medical centers and other hospitals, or practices being bought or networked with healthcare organizations. These hospitals have increased their investment in technology and infrastructure, which also has advanced with mergers between healthcare supplier companies, such as devices manufacturers.

This has created an easier point of entry for large companies to make sense out of because it's simpler to target large healthcare systems than thousands of individual hospitals, Mr. Carlson says.

"There has been tech in healthcare for some time," Mr. Carlson says. "Meditech for instance was founded in 1969 and Cerner in 1979."

Hospital of Philadelphia to build real-time predictive models to evaluate vital signs, enabling a new form of clinical decision support for clinicians."

In February 2018, Apple announced the launch of its own primary-care health clinics, AC Wellness. The initiative seeks to bring healthcare services in-house with an emphasis on preventive care. The company is now recruiting physicians, physical therapists, and nurses.

This development follows the alliance between Amazon, Berkshire Hathaway, and JP Morgan Chase, announced in January, to form an independent healthcare company for U.S.-based employees. The companies hope to bring size and scale, as well as complementary expertise, to healthcare for their employees. It has been speculated the three companies may cut the middlemen in the drug supply chain, such as the PBMs and drug distributors, or bring in new technology such as telemedicine to improve access to primary care for workers.

These announcements serve to further blur an already complex environment, exacerbated by the merger between CVS Health and Aetna and, most recently, between Cigna and Express Scripts. Industry watchers say both the CVS-Aetna and Cigna-Express mergers would alter the healthcare industry, with payer-PBM organizations having significant control over the marketplace.

Healthcare advancements such as Amazon, Berkshire Hathaway, and JP Morgan's announcement, as well as Apple's opening of employee-only clinics, represent the attempt of a different major healthcare player — the employer — to assert influence on healthcare consumption, Mr. Darling says.

"How these entities will drive change remains undetermined, but one thing is certain: the advantage that newer entrants have over industry incumbents is a fresh slate and a new perspective," he says. "They will approach problems in unconventional ways, empowered by technological advancements and insights."

Outside In and Inside Out

Much of the change across the industry can be attributed to vertical integration, Mr. Darling says, driven by the Federal Trade Commission's challenge to horizontal merger strategies between industry healthcare incumbents to gain economies of scale.

He describes vertical integration as strategies in which separate parts of the healthcare supply chain integrate under one company.

"For example, the 2017 CVS-Aetna merger will result in a company that owns three parts of the healthcare procurement chain: PBMs, insurers, and retail," Mr. Darling says. "The Cigna-Express Scripts merger is a response to both the recent CVS-Aetna and UHC-DaVita combinations and UHC's Optum's acquisition of providers such as Surgical Care Affiliates in 2017. It is a strategy to remain competitive for the last remaining stand-alone PBM Express Scripts and large payer Cigna."

The impact on the industry, he says, will be increased bargaining power with drug and device suppliers, potentially driving down prices, creating cost transparency in the supply chain, and improving the ability to anticipate patient behaviors and intervene before health conditions worsen.

"Using machine learning in combination with more comprehensive consumer behavior



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PAUL DARLING
ZS

Nevertheless, he says healthcare and hospitals have been slower to adopt technology than perhaps other industries have.

Tech and Data-Driven Disruption

Mr. Darling says the recent mergers and the tech entries into healthcare all point to one thing: developing a more complete big data view of consumer behavior and attempting to predict and influence that behavior to preempt the healthcare system to minimize high-cost health events.

"This is supported by Google's announcement of partnerships with insurers to identify at-risk patients and the interventions that would be most effective to lower the cost of population health," he says.

Companies such as Microsoft, Google, and Amazon have made their way into healthcare over the years through offering cloud services, Mr. Darling says. "These cloud services improve physician access to data, lessen physician administrative burden, and enable physicians to interact with patients longer," he says. "These services also facilitate analytics through cloud computing and customization in the case of Google Cloud."

Artificial intelligence and predictive analytics are also taking center stage, with players forming technology-driven partnerships with stakeholders across the supply chain — from Onduo's partnership with BCBS to identify appropriate diabetes interventions to IBM's partnership with Mayo Clinic using AI to improve breast cancer clinical trial recruitment participation by 80%, Mr. Darling says. These tools could improve outcomes, lower acute care utilization, and significantly decrease healthcare cost.

(Editor's note: for more information about the impact of AI on the life-sciences industry, please turn to this month's cover story.)

Telehealth is another growth area, aimed at improving access to care. Mr. Darling points to the partnership between Samsung and American Well to provide telehealth services on Samsung's mobile device for providers, delivery networks, payers, and employers.

"Recent innovations are being followed with additional offerings from other players and encouraged heavily in some cases by federal agencies," Mr. Darling says. "For example, Veterans Affairs has stood strongly in support of telehealth solutions, and CMS Administrator Seema Verma announced an initiative at the 2018 HIMSS conference focused on improving interoperability of health records, a move that could support cloud solutions and would welcome the industry best suited to solve a data problem."

Lessons in the Field

Mr. Darling says health incumbents have much to gain from these new entrants in the way they embrace change and technology. These disruptors come from industries that require that they maintain an innovation-focused culture and are willing to cannibalize their own products to grow and satisfy their customers.

In addition, the experience technology organizations bring in terms of processing information to solve complex problems has proven itself useful in the transition to value-based care, for example, through the rise of population health analytic solutions.

At the same time, health incumbents have much to teach the new entrants. Healthcare is very different from the consumer-led industries these new entrants come from. In healthcare, the consumer is not the direct payer, doesn't have the knowledge to adequately judge the product, and doesn't necessarily desire the service. Furthermore, the industry is heavily regulated with constantly changing rules.

While Mr. Carlson says there will likely be objection and fear of new competitors, there's

also a kind of "game up" feeling in the industry as the result of the announced arrival of the big companies.

"Johnson & Johnson CEO Alex Gorsky said at J.P. Morgan's conference, 'I would encourage almost anybody, whether it be in pharma, med device, or OTC, we should all be acting like Amazon is getting into our business because frankly we have to create a crisis, we have to make sure we're always competitive, we're always thinking about how we can be more effective, across our different businesses'," Mr. Carlson notes.

"A reaction from Cleveland Clinic was similar, with CEO Adrienne Boissy saying: 'The Amazons and Apples of the world have mastered service, and they are coming for us'."

But Mr. Carlson says while these companies are experts at technology and customer service, healthcare has a higher demand for trust than any other industry and he would be skeptical of predictions that some of the healthcare specialist companies will be removed.

"I think about Meditech, Epic, or Cerner and I can't envision them being forced out of the space even by competitors with large scale," he says. "I think at the end of the day healthcare companies need to work with these partners."

The emergence in healthcare of the IBMs, Apples, and Googles represents the fulfillment of the long-term promise of evidence-based medicine in terms of gathering insights from big data and better performance, Mr. Carlson says. Payers, providers, suppliers, governments all want better outcomes, so having data that provide insights on how to treat a patient with an infection and for how long is valuable, he adds.

"In terms of healthcare organizations and healthcare costs, it's possible these players can reduce costs through better distribution and cutting through middlemen distributors, but we'll wait and see," he says. "For the hospital, there's another benefit that will drive this trend. Working with a large player provides a trust advantage — we see this with IBM already where hospitals are working with Watson. Since healthcare is about trust and patients want to trust healthcare organizations, that's an added benefit when a hospital can say it has the latest systems from Apple and IBM. As skilled as they are, healthcare specialist firms can't offer that at the current time."

According to Mr. Darling, tech giants will add value in the daily lives of patient and to healthcare delivery and payment.

"Engaging patients at multiple points of intervention and linking prescription drug use to outcomes reinforces the value that pharmaceuticals provide to patients, providers, and payers," he says. **PV**

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