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Disruption through Innovation: How Health Systems Are Becoming a New Class of Private Investor

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This past June, a tool that empowers clinicians to "prescribe" mobile health apps through the EHR and monitor their use gained a $3 million boost in funding from three health systems: Cleveland Clinic, Atrium Health, and MemorialCare.[1] It's a move that positions these organizations to more effectively monitor care—and profit from their investment down the road. In May, a breakthrough technology that enables oncologists to target treatment for aggressive cancers based on a tissue sample the size of a grain of rice gained $15 million in Series B funding, including from OSF Ventures, the corporate investment arm of OSF HealthCare.[2] And in April, a high-touch, high-tech model for kidney disease treatment received a cash infusion from Ascension Ventures, a healthcare venture arm launched by Ascension that makes direct investments on behalf of 13 not-for-profit health systems.[3]

1 "Xealth Adds Atrium Health, Cleveland Clinic, and MemorialCare to Close $14M Series A," (press release), Xealth, June 20, 2019.
2 "OSF Ventures Invests in Company with Breakthrough Cancer Test" (press release), OSF Ventures, May 20, 2019.
3 "Ascension Ventures Completes Investment in Strive Health" (press release), Ascension Ventures, April 8, 2019.

Key Board Takeaways: Evaluating the Business Case for Health-Tech Startup Investment

What should health system boards consider in determining whether their organization should invest in a health-tech startup? Key questions include the following:

- Will direct investment enable the system to better withstand disruption (such as by providing the opportunity to experiment with innovations in care)?
- Will direct investment accelerate change in the market and create competitive advantage?
- Does the system have a "culture of innovation" that will support direct investment? If so, which stage of investment (early stage vs. later stage) is the best fit?

Direct private investment by large health systems in healthcare services and technology companies is gaining traction, fueled by new competitors and innovations that are rapidly changing traditional business models. Today, more than 40 health systems have launched direct private investment initiatives or are participating in funds created by others. A survey of 21 large health systems found that 71 percent are actively making direct investments in healthcare startups or are considering doing so.[4]

More than 160 healthcare technology investments have been made by healthcare organizations since 2014—and this trend is accelerating. The average deal size among health systems also has increased. Hammond Hanlon Camp LLC (H2C) research shows that about 20 transactions by health systems accounted for more than 20 percent of healthcare technology investments last year.

4 *NEPC Survey: The State of Strategic Investing in HealthCare Systems*, NEPC LLC, March 2018.

What's fueling this trend? Three factors stand out.

The desire to test drive new innovations—and better control their futures. Direct investment enables health systems to fund technologies that meet critical needs. It also positions health systems to gain early access to innovative services and new technologies that could help shape their future while providing

Exhibit 1: Top Five Health System Venture Capital Arms

Investor Name	Last Closed Fund Size ($ in Millions)	Assets Under Management ($ in Millions)	Dry Powder ($ in Millions)	Minimum Fund Size ($ in Millions)	Maximum Fund Size ($ in Millions)	Median Fund Size ($ in Millions)
Ascension Ventures	$255	$805	$233	$125	$255	$212.5
Kaiser Permanente Ventures	$170	$400	$7.6	$10	$170	$20
Inova Strategic Investments	$150	$150	$106.5	$150	$150	$150
Summation Health Ventures*	$80	$100	$3.9	$80	$80	$80
Partners HealthCare Innovation	$66.1	$171.1	$20.2	$6.1	$105	$85.5

*A partnership between MemorialCare Health System and Cedars-Sinai Health System.
Source: H2C research based on publicly available data.

Direct investment enables health systems to fund technologies that meet critical needs.

opportunities for strategic growth, especially at a time when low interest rates have yielded paltry returns on large cash reserves.

For example, in 2012, Catholic Health Initiatives (CHI, now part of CommonSpirit Health) purchased a 20 percent stake in Conifer Health Solutions. This gave CHI access to Conifer's revenue cycle technologies and services without having to build an expensive in-house model. Meanwhile, Allina Health, Partners HealthCare, Kaiser Permanente Ventures, and Indiana University Health's CHV Capital have made direct investments in Health Catalyst to access the firm's data analytics capabilities—critical to supporting strong performance under value-based payment models.

The ability to bring in-house innovations to market. Some organizations, like Mayo Clinic Ventures, the investment arm of Mayo Clinic, look to co-investment to help bring to market technologies developed internally. For example, Mayo Clinic partnered with Boston Scientific to manufacture spinal-cord stimulation devices using technology developed by health system clinicians and researchers.[5] The devices block the neural signals that trigger shortness of breath and muscle fatigue during exercise among patients with heart failure.

The opportunity to experiment with new ways of delivering care—and create greater value. Direct investment enables health systems to take advantage of breakthrough approaches that could disrupt legacy models of care. This past spring, Providence St. Joseph Health—through its venture-capital arm, Providence Ventures—was one of two health systems to invest a total of $10 million in a digital platform that analyzes patients' preferences, clinical needs, and logistical requirements to match the right provider to the right patient.[6]

Generally, health systems that make direct investments in healthcare services and technology companies have operating revenue of $1 billion or more. A survey of health systems with assets greater than $1 billion also reveals significant diversity in the types of investments being pursued: 60 percent of the organizations surveyed are investing in a variety of healthcare verticals rather than targeting investments in a single area.[7]

But direct investment in healthcare companies, even as a minority stakeholder, is not without risk. These investments are complex to launch, manage, and monitor. Some fail to deliver a return on investment. Determining how to measure the success of venture capital investments can be challenging: 85 percent of healthcare

5 "Boston Scientific, Mayo Clinic Collaborate to Speed Development of Medical Devices" (press release), Boston Scientific, March 16, 2016.

6 "Kyruus Raises $10 Million to Fuel Continued Growth" (press release), Kyruus, April 18, 2018.
7 *NEPC Survey: The State of Strategic Investing in HealthCare Systems*, March 2018.

Exhibit 2: What's Hot in Health System Venture Capital Investment? Five Healthcare IT Deals Making Headlines

2019	Company	Round	Amount Raised *($ mm)*	Primary Investor(s)
June 19	xealth	Series A	$3.0	Cleveland Clinic, Atrium Health, MemorialCare Innovation Fund
June 19	RxRevu	Series A	$15.9	UnityPoint Health
May 19	Paradigm	Series B	$15.0	OSF HealthCare
April 19	strive HEALTH	Seed	-	Ascension Ventures
April 19	KYRUUS	Series D	$10.0	Providence Ventures
March 19	xealth	Series A	$11.0	UPMC, Philips, Froedtert & Medical College of Wisconsin, McKesson, Novartis, Providence Ventures

Source: H2C research based on publicly available reports.

leaders whose systems have made direct investments in technology companies find the process of determining what to measure—and how—daunting.[8] And developing the right governance model for venture capital pursuits is a common challenge.

Is Direct Investment Right for Your Organization?

How can health systems determine whether direct investment in technology startups is the right move for their organization? Here are four key considerations.

Develop a robust process for screening potential investments. Look for opportunities to fulfill a key need, whether internally (e.g., capabilities around population health management or precision medicine) or in the industry. Then, assess whether the following options make strategic sense for the system and, if so, which option to pursue:

- Direct investment combined with a contract for services (e.g., revenue cycle management)
- Direct investment only
- Contracting for services without direct investment

In evaluating potential investments, gauge the health system's tolerance for risk and its readiness for innovation as well as the internal resources required to support the endeavor. It's also critical to perform thorough due diligence to ensure clinical innovations are backed by science, the company's business model is sustainable, and the company is compliant with healthcare regulatory requirements, including HIPAA privacy protections.

Leaders also must consider the stage of investment that best suits the health system (early stage vs. later stage) as well as the size of investment that fits the system's risk profile. A recent report shows health system's investments in health-tech startups are heavily skewed toward later-stage investments, at 68 percent.[9]

Establish a governance model for venture capital investments. Create a committee to review opportunities for investment and make recommendations to the board. Include team members with a wide range of expertise—this is critical when investments are made across a variety of sub-verticals, as is typically the case with healthcare

8 *Ibid.*

9 *Health Tech Early Stage Funding Report*, Inova Personalized Health Accelerator, June 2019.

technology investments.[10] Be sure team members represent both the finance and innovation departments, as well as clinical care.

It's also important to appoint a dedicated leader to serve as the champion for overseeing investments and monitoring results. Doing so ensures the health system has adequate support for this function, especially when team members have other responsibilities.

10 "Healthcare Information Technology Snapshot," Hammond Hanlon Camp LLC, August 15, 2019.

Determine the metrics for measuring success. Go back to the strategic reasons for investment and outline the organization's top three to five goals. Then, develop quantifiable metrics for these goals. For example, if the key driver for investment is to increase population health management capabilities, gauge the impact of new technologies on reducing length of stay, costs of care, emergency department visits, and more for a specific population.

Recognize that generating a return on investment could take years—but set a timeline for results. This timeline, along with the metrics for measuring success, will establish expectations from the outset. It will also help board members determine whether to continue the system's investment. Health systems that have undertaken this approach typically find it can take a decade to realize a return, but returns can be twice or triple the investment.[11]

11 Tony Abraham, "Hospitals Look to Venture Capital as R&D Extension," *Healthcare Dive*, April 3, 2019.

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