

Venture Capital Throws Dough That Could Fix Health Care Woe

Some experts say that investors funding innovative startup companies can disrupt American health care, making it smarter and more efficient. Others warn that incentives must change if VC money is to make a real difference.

By Timothy Kelley

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You know the embarrassing “beep” that goes off at the door when the store clerk has forgotten to remove the inventory control tag? Now a similar radiofrequency (RF) technology warns surgeons when they’re about to accidentally leave a cotton-based sponge inside a patient. Call it venture capital to the rescue.

We think of reducing “retained surgical items” (RSI) as a quality rather than a savings innovation, but each RSI can mean upwards of \$200,000 in medical and legal expenses. A 2014 study in the *Journal of the American College of Surgeons* estimated that a system of tiny RF tags that beep when something is left inside a



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patient would cost a medical center \$191,352 to install and use—and save it \$157,024 in operating room time and X-ray costs along with \$441,534 in medical and legal costs. In the study, five organizations striving to reduce RSIs by ordinary methods managed a

77% reduction in the six years ending in 2012, while five that used an RF system cut them by 93%. The beeping simply works better than nurses’ unaided efforts to count sponges. That’s annoying, perhaps, but it won’t surprise any reader of Atul Gawande’s 2009 *The Checklist Manifesto*.

The beeping technology was developed by RF Surgical Systems, a startup acquired in 2015 by Medtronic. Helping RF Surgical get off the ground was funding from the venture capital firm Split Rock Partners. “It’s like a surgical spell-check, providing a benefit both clinically and economically,” says Josh Baltzell, who made the investment for Split Rock and is also affiliated with SightLine Partners.

Digital on the rise

The sponges are perhaps an atypical example of health care’s robust and growing role in the venture capital world. Of course, venture capital is also an important source of funding for biotech pharmaceuticals—its power felt especially in initial public offerings. Bruce Booth, a partner at the firm Atlas Venture, noted in a *Forbes* column last fall that biotech represented just 11% of venture capital financing in the previous three years but 54% of VC-backed IPOs. But Booth went on to report that biotech has actually been shrinking as a percentage of VC-backed assets, from 19% of investments in 2010 to 12–13% in 2015–2016. Why? Because there’s an even bigger fish to fry than new medicines: just plain tech and its potential to revolutionize care delivery.

“Digital health” innovations are booming, thanks in large part to venture capital. As a Brookings Institution report noted in 2015, nearly six times as much money was invested in digital health care venture capital deals in 2014 than in 2009, with such ventures growing faster than VC as a whole. In six years, said Brookings, \$15.4 billion was invested in 2,349 venture deals.

The trend continues, and it’s one no one in health care can ignore. “Payers and providers need to understand venture capital—how it views the world, how it invests, and what it expects to get in return—because that’s the future,” says James C. Robinson, a professor of health economics at the University of California—



Venture capitalists will not have the patience to deal with the myriad of problems in health care, predicts James Robinson of the University of California–Berkeley.

Berkeley. Some see big cost reductions in that future. They say that the bloated U.S. health care system must shed its overspending and that there's big money to be made helping it do so. "Health care now costs \$18,000 per year for a family," says Robert Kocher of the venture capital firm Venrock, and an Obama administration veteran who helped develop the ACA. "People can't afford it. That poses a great opportunity to redesign health care—and a great entrepreneurial challenge." Kocher sees VC as a tool to create new health care entities that can achieve big-time savings.

Some developments already seem to support his view. In a January 2017 *Health Affairs* blog post, Robinson and Baltzell highlighted a shift among medical-device investors "from cost-increasing physician preference items to cost-decreasing hospital preference items." This trend, they say, has paralleled the rise of hospital-employed physicians. Cost-cutting hospitals seek to "weaken the relationship between physicians and medical device firms"—including financial perks. RF Surgical, the authors note, sells to hospital administrators, not doctors.

While 30 years ago a medical innovation could be adopted if it was better, faster, or cheaper, says Baltzell, today it must be all three. "And one thing venture capital can do," he says, "is help screen ideas that provide those benefits and help nurture those companies to their optimal conclusion, which pays dividends to the health care system."

VC's influence on health care innovation isn't spread evenly across the country. It's stronger in California, New York, and Massachusetts than in the middle of the

country, says Kathleen Regan, executive vice president and COO of the Commonwealth Fund. But no part of the country will be immune from the effects of the changes it's helping to bring about.

Target: high-need populations

For example, VC-funded companies such as ChenMed, Landmark Health, and CareMore use plenty of mid-level providers and patient outreach

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techniques as they target high-need populations in Medicare Advantage plans. CareMore in suburban Los Angeles was founded by a group of physicians in the early 1990s to focus on care for the elderly. Acquired in 2006 by the New York private equity firm CCMP (formerly JPMorgan Partners), it is now a subsidiary of Anthem. It uses "extensivist" physicians to oversee care aimed at reducing hospitalizations, cutting costs of the sickest patients by frankly spending—as a 2017 Commonwealth Fund report put it—"about twice as much as traditional Medicare keeping sick patients from getting sicker." By identifying high-risk individuals and

Pink slips coming?

If venture capital investment does manage to take a cleaver to our bloated health care system, the industry's huge payroll could be an early victim. Venrock's Bob Kocher points out that two thirds of the nation's \$3.5 trillion annual health care spending goes for wages. A disrupting process that streamlines the industry, he believes, will require major employment cuts.

"If they're going to reduce costs ultimately," agrees Commonwealth Fund COO Kathleen Regan, "we're going to have to provide more efficient care, which means fewer touches."

But she adds that we haven't seen job loss in health care yet, and University of California–Berkeley health economist James C. Robinson believes much may depend on local labor markets. He notes that robots are in wide use in San Francisco hospitals partly because of high labor costs in the area. But if a region abounds in underemployed workers, he says, "hospitals will feel less pressure to reduce employment."

making sure they get treated aggressively—which includes patient education, but also rides to care centers if needed—CareMore has, says the report, cut diabetic amputations from gangrenous infections by 66% from Medicare’s fee-for-service average. In 2015, CareMore members had 20% fewer hospital admissions than the Medicare norm, 23% fewer bed days, and a 4% shorter average stay.

Regan sees companies like CareMore as part of a periodic trend. “In the 25 years I’ve been involved in health care financing, there have been waves of interest in investing in health care services,” she says. “The first was around the bricks and mortar—building hospitals and ambulatory care centers.” Now a



Better, faster, cheaper—those are the criteria needed for the adoption of a medical innovation these days, says venture capitalist Josh Baltzell.

new wave is upon us. And this one is focused not on buildings but on care delivery itself. Witness the Medicaid Advantage startups, new Medicaid managed care initiatives, and a flurry of pharmacy-based clinics that could reduce costs by offering better-than-ER convenience.

Still, the hope that these innovations will lower overall costs is yet unproven, says Regan. “For the venture industry in health services, it’s still very early days,” she warns, noting that, like education, health care is a tricky mix of for-profit and not-for-profit. “It’s not an easy climb to be a disruptor in health care,” she says. “You have to have caution whenever people come in from the outside and try to change an established system with lots of entrenched players. And I can’t think of an industry with more entrenched players than health care.”

Skeptical view

Regan isn’t alone in her skepticism. UC–Berkeley’s Robinson also doubts that venture capital can by itself forge a leaner health care system. “Some innovations reduce cost and some innovations increase cost,” he says. “I don’t see venture capitalists as positioned to deal with waste, inefficiency, fraud, collusion, over-regulation and the other cultural and administrative sources of the problems of the U.S. health care system,” he says. “It’s just not where they are.”

Indeed, even those who invoke VC’s potential magic concede that it can’t do its magic without at least a few consistent ground rules from Washington. They point out that other industries that have undergone cost-cutting disruption—bookselling, for example—were far less regulated. Jonathan Rothwell, coauthor of the Brookings report whose title asks if VC is “a cure for health care inefficiency” (he’s since moved on to Gallup), says that though VC “can make short-term differences, I don’t think it can revolutionize our health care system in the absence of political change.”

The problem is one you’ve heard about before: incentives. Too much of the industry still rewards volume rather than value, and while providers and payers ostensibly battle over prices, too often instead of whittling prices down that battle perpetuates a cumbersome, byzantine system that each side tries to game. Says Rothwell: “Entrepreneurs can’t really come up with software that gets around that; the rules are such that there’s no efficient way to do it.”

“Only time will tell,” the 2015 Brookings report concluded, if “digital health companies will fulfill their promise of increasing the quality and efficiency of health care.” But Regan offers hope. Conceding that what VC can do will depend on economic incentives and that “we’re still at a place on the seesaw where volume predominates over value,” she notes that the whole idea of VC is to be ahead of the game. If the seesaw had already tipped, she says, it would be too late. **MC**

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