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Can Todd Park Revolutionize the Health Care Industry?

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TECHNOLOGY

His title is chief technology officer, but at HHS, Park is the entrepreneur-in-residence, inspiring others to make government data accessible



Todd Park genuinely intended to retire.

At the age of 24, he'd co-founded what would become a thriving health care technology company called Athenahealth, and nearly 10 years later he made a fortune when the company went public with a market capitalization exceeding \$1 billion. His wife Amy, who he'd met when he was at Harvard, had long wanted a husband who wasn't glued to his career seven days a

week, and the couple had been putting off having a child. The two moved from Boston to California in 2008 and Amy gave birth to a son that same year. Though Park was, in theory, retired at this point, he continued to invest and work with health care technology startups. But with these new companies he had a more hands-off approach, meaning he wasn't heavily involved in their day-to-day activities. At 36, it looked as if he'd put much of his entrepreneurial work behind him and would spend the rest of his days as a family man and passive investor.

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The first sign that this scenario wouldn't play out came when, in June of 2009, he received an email from Bill Corr, the deputy secretary of the Department of Health and Human Services. "It said, 'We'd like to talk to you about becoming chief technology officer of HHS,'" Park told me during an interview in his HHS office last month. "I always wanted to meet Bill, and so if he asks to meet with you, you don't say no. But I thought I'd learn more about what he was looking for and help him find the right person, because basically if we moved back from California to the east coast, and I jumped from the life I was living into the 24/7 startup life again, my wife would behead me. She had been waiting a long time to have a husband and have a dad for our kid."

But Corr was what Park described as a "cordial and lethal sales person," and at his office, he began to lay out the framework of this brand new position opening at HHS. First and foremost, Corr explained, this position wouldn't be heading the IT of all of HHS; the agency already had people for that task. Instead, the CTO position would focus entirely on being an "entrepreneur in

residence." Earlier that year, President Obama, on his first day in office, had signed the [Memorandum on Transparency and Open Government](#), which would usher in "a new era of open and accountable government meant to bridge the gap between the American people and their government." The idea was to force government agencies to engage in radical transparency, a move that would include opening up its vast treasure troves of data and funneling it through APIs so that private citizens and businesses could build apps and tools that could leverage the data.

The potential benefits of such open government initiatives are immense. In my interviews with Park, he repeatedly brought up the example of the National Oceanic and Atmospheric Administration. In the 1970s, NOAA began releasing its daily weather data to the public, and today that data is used by hundreds of companies, from Weather.com to a variety of smartphone apps. The government also opened up its GPS data in the '80s, a move that gave birth to an entire industry of companies that use the data across millions of devices. A recent report from the McKinsey Global Institute found that, as the *New York Times* [put it](#), "the value [of open data] to the health care system in the United States could be \$300 billion a year, and that American retailers could increase their operating profit margins by 60 percent." Given that U.S. health care costs billions of dollars a year and makes up 17 percent of GDP, companies have more than enough incentive to create applications and tools that can cut costs and drive economic activity within this sector.

In that initial meeting with Park, Corr said that HHS was sitting on mountains of data, most of which wasn't tapped for its full potential. The new position, he explained, had no specific job description, and Corr would make sure to provide plenty of air cover for the CTO so that Park "would actually be empowered to do stuff."

"At the end of the meeting I said, 'This is actually a really amazing job. I'd really love to do this job, but I'll be divorced,'" Park recalled. "Bill replied that that would be bad, and if you're going to be divorced you shouldn't do this job. But why don't you go back and talk to Amy about it and see what she says?"

"So I talked to Amy about it, and she was incredibly angry. But then after four days she came back to me and said, 'If they're really creating an entrepreneur in residence job at HHS, it's your national duty to take that job. And as much as I can't believe I'm saying this, I'll move back to the East Coast -- which I hate -- with our baby, to be there with you.'"

And with that, without even moving into the house they'd just purchased a few weeks before -- the house where they planned to spend the rest of their lives -- the two picked up and moved to Washington, D.C. Since that move, Park has been working to answer one question, a question that defines his entire job at HHS: Can he turn the agency into the NOAA of health data, and, in the process, ignite a technological revolution in the health care industry?

Park's propensity to attack immensely complicated problems dates back to his early childhood. Born in 1973, he grew up in Ohio and was the son of a chemical engineer who emigrated from South Korea and then spent several decades working for Dow Chemical Company. "I think my father was the most decorated engineer in that company except for Dr. Dow himself," he recalled. Park's father had a profound influence on him, both for his tendency to be analytical and his gift



for invention. "He basically created this life in America for his family starting with virtually nothing. They were moving from Korea, where he grew up in great poverty. He was a life entrepreneur, if you will. He really inspired me on a very fundamental level." Given all the Amy Chua-induced [focus](#) on Asian parenting, it may come as a surprise that Park's father often told his son he was working too hard; he was afraid that his son would work himself into the ground and often encouraged him to relax. "A kid never listens to what his parents tell him to do," Park argued. "The parents actually act as an example of what their kids themselves do. He worked non-stop. He worked day and night. And he worked weekends. He would take us to a fishing hole at the Dow Chemical research center in Ohio so he could keep working. He'd come out just to make sure we weren't falling in the lake or anything like that ... He was an example to me and my brother of a person who was genuinely consumed by his work."

In 1990, Park enrolled in Harvard, majoring in economics. While there, he took a course by a professor named David Cutler called "Public Sector Economics." It was in this class that he first became intrigued by the myriad problems in the health care industry. "I was very attracted to it because it's a very important problem, and a very fundamental problem," he said. "How do you deliver the best possible and affordable health care to maximize health?" It was Cutler who first turned him on to the entrepreneurial opportunities in the industry, showing how it was a lack of innovation in the payment systems and delivery of care that was creating so much waste. The person who could solve these efficiency issues could reap millions or even billions of dollars.

Like many health care economists, Park considers the method in which American insurance companies pay for and incentivise medical care to be the underlying problem with the current system. The way the model works now, insurance pays for health care on a per-service basis. Each individual treatment has a specific cost associated with it, creating a model in which

doctors have an incentive to provide more procedures in order to capitalize on the system. In his studies, at Harvard and after, Park has focused on the innovative leaders who have turned this model on its head, focusing more on long-term care as a way of driving down costs. In a recent *New Yorker* article, for instance, Atul Gawande [covered](#) "hot spotters" -- medical professionals who target the one percent of patients that drive the overwhelming majority of health care costs by assigning an entire team geared solely toward driving down those costs with preventive care. During my interviews with Park he made several references to that one article.

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Park first got a taste for the massive blockades hindering payment reform when he and his partner launched Athenahealth. Before it became a software company, Athenahealth was focused on maternity care. The team wanted to scale a model where instead of assigning a doctor to a pregnant mother, you also assign her a midwife, a nutritionist and a case manager. Though the upfront costs are slightly higher, studies found that this type of care radically reduces the chances of costly complications with the mother, which drives down costs overall by as much as 20 percent. So representatives of Athenahealth approached the major health insurance companies and proposed a new payment model: Instead of paying for professional services, the insurers would pay a global fee for all care -- hospital care, physician care, lab care -- so that if Athenahealth could keep the mother healthy, lower the rate of complications and therefore lower costs, it would be able to more than cover the cost of the additional upfront preventive care, benefit financially and in the process drive down the total amount of money the insurers had to

pay out. A win-win for all. "The insurers said, 'Look, we completely agree with your math,'" Park said. "'We agree with the five-year study that shows this model will work, but we can't rewire our systems to pay you differently from everyone else. We have to keep paying you on a per-service basis, even though we completely believe that this lowers cost for higher value.' And that was my first fundamental lesson regarding the principles of how you pay for health care dictates how health care gets delivered. Because this model can't scale, can't become widespread, if it's not supported by the payment system."

Because of this and other reasons, Athenahealth segued into creating medical management software and online services, and in the late '90s began to take on several investors. One of those investors was Bryan Roberts, a lead partner at a venture capital firm called Venrock. He has been working at the firm now for about 15 years and has invested broadly in health care. After Park left Athenahealth, Roberts continued to invest in companies he was involved with. "Todd is one of a handful of people in the world who I would be involved in anything, anywhere, anytime with him," Roberts told me in a phone conversation. "Todd is smart, and passionate, and personable, but there are lots of people in the world who are those things. For me, the quality that sets Todd apart is that he's a creator. He's very good at creating reality out of an interesting idea, and dealing with the ambiguity of a big problem that has many more variables than solutions, so there's no way to data your way to an answer." Roberts said that Park had several different roles at Athenahealth, and as the company grew he began relinquishing those roles. It was his lack of ego, Roberts explained, that allowed him to put the idea first and step away to let others build upon it.

When Park retired from Athenahealth and moved out to California, he and Roberts invested in a startup called [Castlight Health](#). It was here that Park began to attack the cost and inefficiency issues in our health care system with

renewed vigor, using data in a way that would foreshadow his work at HHS. One of the prevalent problems with America's health care is that consumers can't compare prices for medical services; a colonoscopy, for instance, can cost anywhere between \$600 and \$6,000 in facilities within a three mile radius of each other, but because of the labyrinthine policies regarding how your health insurer negotiates prices with your doctors, there's absolutely no way to determine the cost of a procedure prior to having it. Using the colonoscopy example, a person with a 10 percent copay would end up paying anywhere between \$60 to \$600, depending on the doctor, but because he doesn't find out the cost of the procedure until after it's completed, there's no way to shop around for a better deal.

Castlight, in essence, attempts to be the Travelocity of health care. Learning from his experience at Athenahealth, Park and his team avoided the major health insurance companies completely and instead approached large corporations that self-insured their employees. Safeway, for example, doesn't buy its insurance from a major provider, but instead pays out health care costs through its own pool of money. "So Safeway actually owns all of its own claims data," Park told me. "Castlight can go to someone like Safeway and say, 'Give me all your claims data,' and then reverse engineer from the claims what all the prices actually are." Safeway benefits because its employees can use Castlight to find the cheapest services, the employees benefit because it decreases their copays, and then Castlight benefits by receiving all the payment data to fuel its database. "There was this one focus group that we were doing at the beginning of Castlight where a woman started crying in the focus group," he said. "And the focus group interviewer said, 'What's wrong, why are you crying? Did we offend you with the product demo?' She said, 'Actually, no. I'm sick and my son is also sick, and we have health insurance, but we have the kind of health insurance that has a very high deductible. I have been withholding care for me so I can afford care for

my son. But what you just told me about the health care market is that if I have a tool like this, I can afford care for both me and my son.' At which point everyone starts crying, including me."

Since joining the federal government, Park has divested from all his companies, including Castlight. But, unsurprisingly, he has continued to follow its progress with interest. In March, the *Wall Street Journal* published its annual list of the top 50 venture-backed companies. At the very top of that list, in the number one spot, sat Castlight.

On June 2 of last year, around 400 people gathered at the National Academy of Sciences building in D.C. Three months prior to this event, on March 11, Park had met with about 45 leaders in the health care and tech industries. The two sides had never met each other before, in fact they probably didn't know each other existed. Standing at the front of the room, Park told them that starting within the next few days, his team would begin releasing massive amounts of health care data across all the various agencies under HHS (some of it had already been released, but in obscure locations not easily accessible). Their task, if they chose to accept it, would be to spend the next 90 days building technology tools around that data. The ones that succeeded would be able to present their creations at the National Academy of Sciences for what had been named the Community Health Data Initiative Forum.

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This kind of entrepreneurial corralling is evident in all the work Park has

done so far since joining HHS. "I have no budget," he said. "I have no formal team. I don't control any government contracts. I don't control any grants. It's perfect, because it actually gives you the kind of freedom to maneuver, to really be a change agent." When he started the job, he created what he calls a virtual startup model. "The idea is you find a particular idea or initiative that you want to get going. And the first thing that I do is I find the three to five people at HHS who had that idea a long time ago, who have been obsessing about it, who know a lot more about it than I do, who have connections and data and resources and people that they can throw in the mix. And then I recruit them to join a virtual startup to do this thing."

Given his roots, it's not surprising Park is trying to run his department like a Silicon Valley company. The deadlines his teams set are no longer than 90 days out, in fact they're often shorter. Each project moves at a rapid velocity, with him acting as the virtual startup's CEO. Once one reaches maturation, he hands it off and then moves onto the next virtual startup.

At the June 2 event, the people he'd met with 90 days prior came together and showcased 20 tools they'd either improved upon or built from scratch using the newly released data. The idea, Park said, was to maximize publicity for these tools by revealing them all at once. And then following this round of publicity, he hoped other companies he hadn't met with would catch wind of the data and begin creating tools of their own, spawning a self-perpetuating arms race that would generate new tools at a faster and faster rate. The end goal -- or the indicator of Park's success -- would be when he no longer needed to publicize the data at all.

Though the tools displayed for the forum had only been created in the span of 90 days, it wasn't difficult to immediately grasp their intrinsic worth. For its contribution, Microsoft began pulling information from an HHS site called [Hospital Compare](#). The site contains detailed quality and patient satisfaction

information from hospitals across the country, but a recent survey found that 94 percent of Americans don't even know it exists. Microsoft downloaded the information and then integrated it into Bing's search, so now when you perform a search for any particular hospital, in addition to Bing's normal Web results you'll also receive -- in a gray box -- the patient satisfaction for that particular hospital versus the state average, followed by a link to more information. That link sends users to hospitalcompare.hhs.gov. Park used Bing recently to determine which hospital will help in delivering his second child. "We're eating our own dog food, as it were," he said, laughing. [//hospitalcompare.hhs.gov](http://hospitalcompare.hhs.gov)>

One of the many data points released by HHS is a directory of community health centers -- where the uninsured can go to get free or inexpensive health care -- available across the country. A tool called [iTriage](#) had already built iPhone and Android applications that allow a user to type in a medical treatment and then search for the closest providers offering those treatments. For the Health Day Initiative, the company simply added in the government's community health center data to its search. According to Park, tens of thousands of iTriage users have found community health centers since it integrated them into its results.

Surprisingly, the most popular tool -- indicated by the long line of people who gathered to try it at the event -- didn't have any direct, immediate benefit. A company named MeYou Health created a game called [Community Clash](#), which acts as a kind of Black Jack for community health data. The game allows you to plug in your city and then pick a rival city with which to compete. Several health indicators are displayed on cards and you have to switch out the indicators in your city that you believe are weaker than the rival city's. "There's a burgeoning thread of activity happening that says maybe the way to educate people on health is not to tell them to eat their spinach," Park said. "In a world where Farmville goes from zero to 70 million

users, I think the person who starts 'Healthville' and gets 50 million users, that person will be one of the most important health care figures in the 21st century, because they'll do more in that one stroke to advance health care education than all public health announcements combined."

Alexander Howard, who [writes about](#) open government initiatives for O'Reilly Media, has been closely following Park's work since around mid 2010. As he got settled into the role of covering Gov 2.0, as open government is sometimes called, he kept hearing Park's name come up. He had been vaguely aware of the new CTO before then as someone who had come from the private sector and was a successful entrepreneur. "That's not that common in government, necessarily," Howard told me in a phone interview. "He was part of this class of people who had done interesting and important things in the private sector who were coming into government to try to use technology to make things better."

Howard argued that it was Park's connections to the private sector that allowed him to act as a catalyst between HHS and outside companies. "What he's done -- in terms of socializing it to the development community, in terms of being a bridge to them, in terms of being a spark -- cannot be overstated," he said. "It's not only his ability to reach the relevant players, but being able to explain it as someone who has been in their shoes, who knows what their concerns are and can speak the language of someone outside of government -- I think that's a big deal."

I asked Howard to put Park's work into the larger context of open government initiatives, including ones run by non-HHS agencies. How would open data for health care compare to the industry effects of releasing NOAA and GPS data? Given that health care takes up such a large chunk of our GDP, should we expect to see much greater economic activity from the HHS projects? "With health care we're talking about hundreds of billions, if

not trillions, of dollars," he replied. "We're talking about unbelievable costs and really serious outcomes in terms of people not getting the care that they need, that they deserve. We're seeing people not being able to make informed decisions based upon really good data, for a lot of reasons. The existing privacy laws are there for good reason, but they make it difficult for organizations to draw the kind of insights from them that they need. It's created so many problems for people in health care." And because the stakes are so high, "any percentage improvement, a small one, adds up to ridiculous amounts of money" saved.

Perhaps the most ironic thing about these open data initiatives is the fact that the more successful they are, the less credit Park and HHS will receive for implementing them. These projects are designed so that they can be seamlessly integrated into already-existing tools, and the users, because they're not accessing the information directly from a government website, are often unaware of where the data is coming from. "I don't know if people really realize that when they turn on their TomTom or use their Garmin that they should be grateful to their government for having released that data, but they sure as hell are grateful for the ability to figure out where they're going," Howard said. "They're not going to recognize [Park's work] as an outcome of the government. They're not going to recognize it as something called Health 2.0. They're just going to go use the same thing they've been using for awhile and find that it has more information about the stuff that they care about."

I couldn't help but assume that Park would be fine with this. As Bryan Roberts had relayed to me, Park has never been afraid to put his ego aside to make way for an idea. On June 9 of this year, he plans to host the second annual Health Data Initiative Forum, and he told me that this time there are companies he's never even heard of competing for the coveted slots so they can showcase their tools to the world -- over 75 applied, and 45 were selected. If developers are now creating applications without needing the

CTO to act as the catalyst between the private sector and government, then perhaps Park can soon make a second attempt to retire and move back to California with his wife and children so that he can spend the rest of his days simply as a father and husband.

Maybe this time he'll succeed.

Images: 1. tedeytan/Flickr; 2. Todd Park/Wikimedia Commons.

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