JANUARY 2018 OUTLOOK

Chief Innovation, Transformation & Strategy Officers

Introduction

Our traditional January "SI Outlook" has asked CEOs, CIOs and other members of the C-suite a simple question: What are your top IT-enabled strategies for the coming year? This year we feature a mix of "new" titles— Chief Innovation Officer, Chief Transformation Officer and Chief Strategy Officer—to best reflect the dynamic change healthcare is undergoing. With these cutting-edge executives, titles matter and don't matter, depending on perspective. That's why, instead of a single question, we asked four:

1. Why did you select the title and what do you mean by that term?

2. To whom do you report?

3. Who reports to you?

4. What's your relationship to the CIO (a traditional SI focus)?

5. What are your top strategies for 2018?

We were not disappointed. Whether you call it innovation, transformation or strategy, disruptive change is happening in healthcare. And SI member organizations are leading the way.

Ascension: engaging the consumer

Chris Young, VP of Innovation at Ascension, a St. Louis-based health system with 141 hospitals in 22 states and the District of Columbia.

"As the VP of Innovation, I am really driven by the need to achieve a balance between the practical things that can impact us and those we serve now, as well as engage in longer-term disruptive trends and technologies. We put a lot of thought into how we might disrupt the status quo in small and large ways, but we have to also be engaged in the here and now," he says. "Innovation reports to the COO of Ascension Holdings and it is a small group that is amplified by pilot teams in the Ministries."

Chris Young, VP of Innovation, Ascension

Ascension has spent a lot of time on digital consumer engagement. "It's difficult. Health IT systems are not geared to address consumer needs," Young says. "There are things you can do, such as making it easy to schedule on all mobile devices—things like office visits, lab work and online clinical visits. Acute care, however, can be much more complex. The hard part is meeting the individual's expectations. If you schedule an appointment, both the digital and the onsite experience must be seamless. You need to blend the brick and mortar and virtual world workflows and think about the total experience."

The objective is extreme personalization and being meaningful to consumers. "How do we roll out the digital red carpet for them? How do we interact with archetypes like the Alpha Daughter who has one-to-three children, takes care of elderly parents, makes many of the decisions for their family's healthcare and

fundamentally has very little time? What can we do to help them manage all of the inherent complexities? We start by taking as much friction out of the system as possible and make it easy for patient consumers to access and engage with us," he says.

Genomics

Another area of innovation Ascension is monitoring is genomics. It raises many opportunities, but comes with many complex ethical questions. "We need to be very thoughtful about what the boundaries of this science should be in practical application," notes Young. "The therapeutic possibilities could radically change healthcare if the science pans out and we just need to ensure the ethical considerations are paced with the science."

> **"Blockchain coupled with Machine Learning will one day enable consumers to pull all kinds of information together about their health from a variety of sources."**

Also under scrutiny by innovators is Blockchain, which is already transformative as a technology that facilitates secure online transactions. Blockchain is described by Wikipedia as "a decentralized and distributed digital ledger that is used to record transactions across many computers, so that the record cannot be altered retroactively without the alteration of all subsequent blocks and the collusion of the network. This allows the participants to verify and audit transactions inexpensively."

Young views Blockchain as a potential game changer in healthcare for identity management, eligibility management and perhaps even claims adjudication. For example, payers and providers could be able to perform pre-authorizations using Blockchain-enabled identity management and potentially eliminate significant delays that exist now.

Additionally, within digital transformation is included the evolution of AI and Machine Learning, and that will create powerful tools within healthcare in the next 10 years. "It is really about getting contextually relevant information that is actionable at the point of need. Things like Blockchain coupled with Machine Learning will one day enable consumers to pull all kinds of information together about their health from a variety of sources both in and out of the traditional healthcare ecosystem," he says.

Innovation has to include the enterprise

As VP of Innovation, Young officially reports to the COO of Ascension Holdings and, he says,

"You really need to make yourself open to the organization at all levels and be willing to be a convener and influencer to move things." Innovation clearly requires taking risk and a lot of hard work.

Young works with associates across the organization, including people who help him conduct analysis and manage innovation pilots. "I don't have a large team, so I really have to rely on working through teams in our Ministries to execute on pilots. This really helps, though, in terms of practical ownership and impact. Working on innovation teaches you to not worry about what your title is. The good thing about healthcare is you see so many phenomenal human beings every single day that are engaged in serving our patients. The key to success is getting the right people engaged early and letting them co-create the work."

As a former Ministry-based CIO, Young has a highly collaborative relationship with Ascension CIO Gerry Lewis. "So much innovation is technology-based; Ascension IS has lots of people focused on innovation. That said, it's important to remember that not everything is technology-based. You need people thinking about the core business today and what it might become. Innovation can

have less to do with IT than workflows and organizational constructs."

Not surprising, digital consumer engagement sits at the top of Ascension's list of key innovation strategies for 2018. "It's a priority," says Young. "We are scanning and testing a variety of things, but we stay connected with what is needed now. Everything does not need to be a rush. With AI, we are watching and in some cases letting others prove out the use cases. Being a fast follower is not always a bad thing. AI is a word many throw out there without a lot of real expertise or experience. We are in the midst of some amazing technological transformations, and the next decade will be extremely interesting for healthcare."

Adventist Health System: the ABCs of transformation

Nishant Anand, MD, Senior Vice President, Chief Transformation Officer and Chief Medical Population Health Services Officer at Adventist Health System, an Altamonte Springs, Fla.-based system with 45 hospitals in nine states.

"Organizations define the role of chief transformation officer many ways, but we define it as the executive leader who champions

Top 10 innovations

→ Next-generation sequencing (NGS)
→ 3D-printed devices
→ Immunotherapy
→ Artificial intelligence (AI)
→ Point-of-care (POC) diagnostics
→ Virtual reality (VR)
→ Leveraging social media to improve patient experience
→ Biosensors and trackers
→ Convenient care: Retail clinics and urgent care
→ Telehealth

Source: Deloitte, "Top 10 health care innovations: Achieving more for less."

**Nishant Anand, MD, SVP,
Chief Transformation Officer
and Chief Medical Population
Health Services Officer,
Adventist Health System**

changing care from isolated, reactive care to holistic care, or from the single encounter to various settings across the continuum," he says.
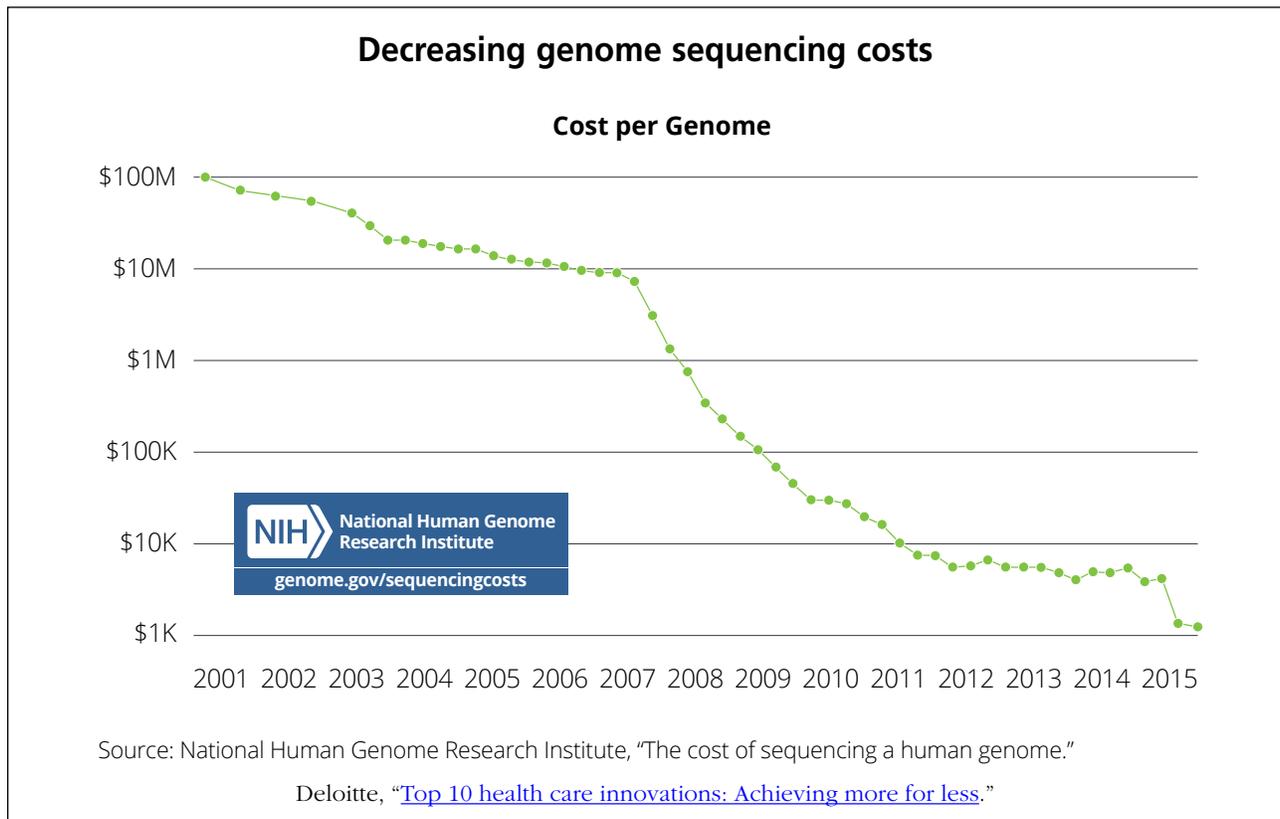
Healthcare transformation involves dual changes, notes Anand. Borrowing from the book, "Dual Transformation," healthcare systems are trying to plan for the future while strengthening their positions today, an effort summed up in a simple equation: A + B + C = Delta. "A" represents the current fee-for-service market, where being operationally efficient is paramount to maintaining hospital margins as well as to break even on Medicare reimbursements and provide exceptional care. "B" focuses on value-based care, going upstream to take financial accountability for lives. "C" represents service lines like cardiovascular and orthopedics, typically the catalyst to move safely from A to B. Transformation captures the essence of all three.

Second, transformation involves changing the delivery of care. "Besides Chief Transformation Officer, I am fortunate to serve as the Chief Medical Officer for the Population Health Services Organization, which enables our teams to successfully transition the system from volume to value. I've had roles in hospital operations, population health and service lines at various large organizations across the country. One lesson I've learned is that when you try to improve in any one of these without a line of sight to the others, you impede improvement in the others. The dual role helps us leverage the synergies among all areas," he says.

Dual universe

As Chief Transformation Officer, Anand's reporting structure includes the Chief Clinical Officer, Chief Operating Officer and Chief Strategy Officer.

Decreasing genome sequencing costs

Source: National Human Genome Research Institute, "The cost of sequencing a human genome."

Deloitte, "Top 10 health care innovations: Achieving more for less."

Two teams report to him. First, population health, in which he has three direct reports. First, there is the Vice President of Clinical Integration, who has five executive directors overseeing health transitions, primary care medical home, complex care, the member experience center and medical management. Second, the Vice President of Clinical Operations for population health oversees the risk-adjustment program, quality and care gaps, pharmacy and the network medical directors. Third, the Director of Quality and Process Improvement introduces new ways to deliver care through a combination of the latest clinical literature and application of data analytics to implement improved care practices.

His second team is care transformation, which has four leaders. This includes the Director of Intelligent Medical Decision Support, who leverages technology for clinical decision support (CDS) and surveillance; the Vice President of Quality and Patient Safety; the Vice President of Care Transformation (a new position), who is the administrative leader in a dyad with a physician leader; and the Executive Director of Performance Excellence, whose goal is to help drive process improvement and change management.
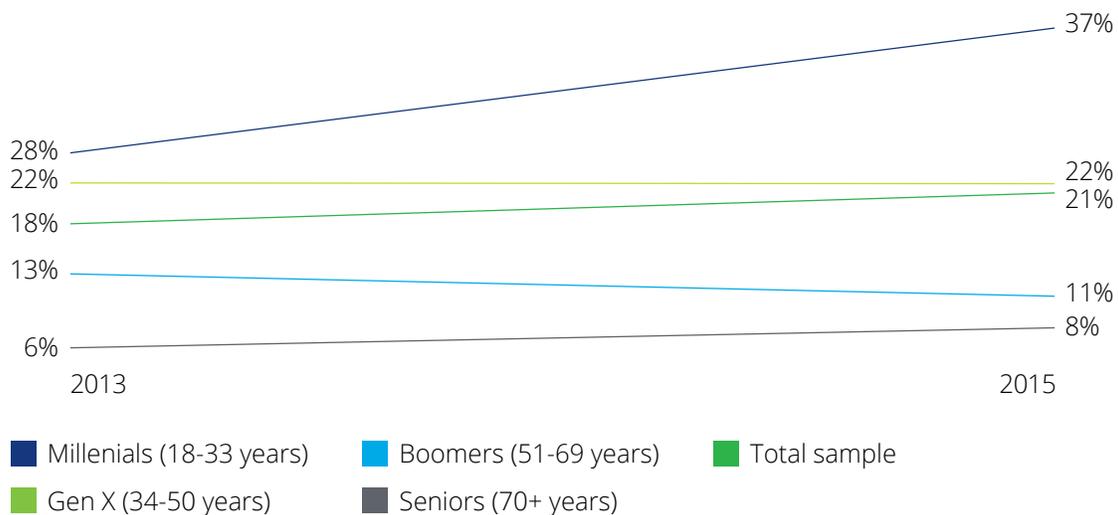
"There's a similar theme: process leaders who help develop new processes and transition them to operational groups, building from the middle out. I liken them to architects who design the house, then they work with operational leaders (dyad team) to build the house and monitor the state of the house as well as our customers' experience with the house," Anand says.

Third era of care

As Chief Transformation Officer, he does not work directly with the CIO, but partners significantly. "Candidly, innovation comes from

Use of social media for health purposes by age cohort

Use of social media for health purposes* varies by age cohort; use is highest among Millennials

37%

28%
22%
18%
13%
6%

22%
21%
11%
8%

2013   2015

- ■ Millenials (18-33 years)   ■ Boomers (51-69 years)   ■ Total sample
- ■ Gen X (34-50 years)   ■ Seniors (70+ years)

*Health purposes include learning more about and/or sharing personal experience with a specific illness, injury, or health problem; specific prescription medications or medical devices; specific doctors or hospitals; the health care system in general; health technologies that can help you diagnose, treat, monitor, or improve your health; or other health- or care-related purposes.

Source: Deloitte 2015 Survey of US Health Care Consumers.

Deloitte, "Top 10 health care innovations: Achieving more for less."

all parts of the organization, including front-line workers. What's unique is that many leaders are trained as CEOs, COOs, CFOs and CMOs, but don't often get to pull clinical, operational and financial parts of the organization together like we can with our transformation efforts. Absent that perspective, clinical folks may develop a care model that operational folks won't be able to implement and that may hurt the bottom line. This structure allows us to look at all those components," says Anand.

"I think we're in the next era of how we deliver care," he asserts. "The first era focused on treating conditions; it was the era of antibiotics. The second was improving surgical technique, including cancer treatments. The third era is really focused on care teams and how they deliver holistic care supported by big data and analytics. That's how this role evolved. I've been in fee-for-service, value-based care and service lines, independently, which don't allow you to integrate them. Our teams are now being allowed to integrate all three areas so they work as a single entity."
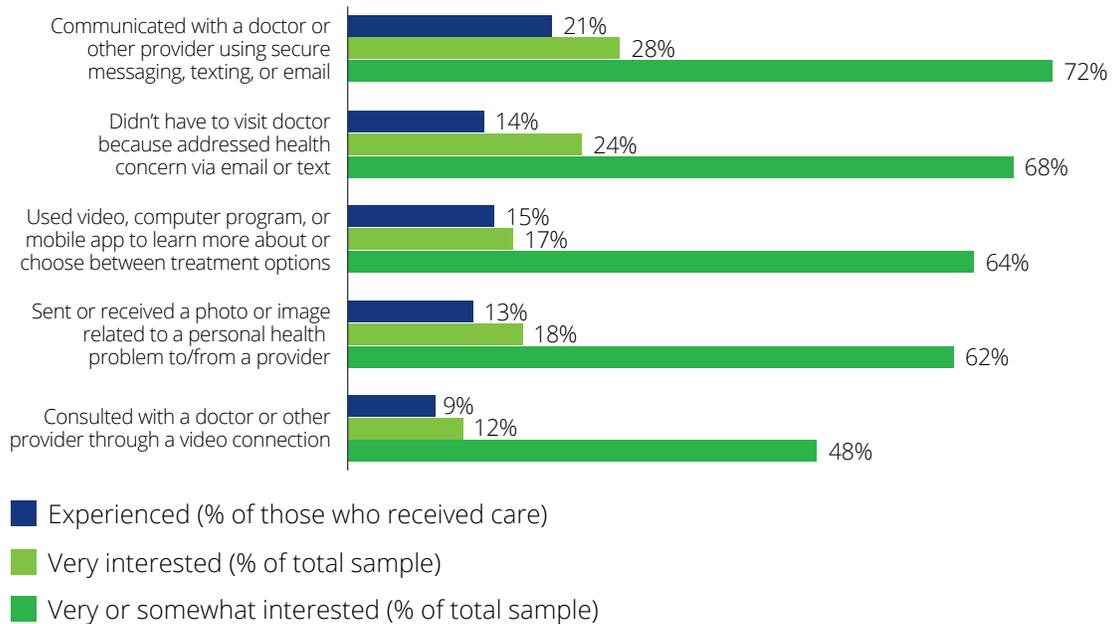
Adventist Health System's top transformation strategies in 2018 include a focus on analyzing and improving care progression, which involves patient flow through the hospital, including the transition to post-acute sites as well as their home. The goal being to never "discharge" patients from its care, but rather support them in health. Second and third are redefining Congestive Heart Failure and cardiac bypass surgery in an exceptional, holistic, end-to-end manner. "For each of those areas," says Anand,

> *"Transformation is really exponential. The first year is about laying the foundation, the second is service-line essentials and the third is achieving the Triple Aim. In the near term, we'll be managing a different system of care."*

Consumer interest in communicating electronically with doctors is high

Interest in communicating electronically with doctors is high, but only one in five who received care has done so

Activity	Experienced	Very interested	Very or somewhat interested
Communicated with a doctor or other provider using secure messaging, texting, or email	21%	28%	72%
Didn't have to visit doctor because addressed health concern via email or text	14%	24%	68%
Used video, computer program, or mobile app to learn more about or choose between treatment options	15%	17%	64%
Sent or received a photo or image related to a personal health problem to/from a provider	13%	18%	62%
Consulted with a doctor or other provider through a video connection	9%	12%	48%

■ Experienced (% of those who received care)
■ Very interested (% of total sample)
■ Very or somewhat interested (% of total sample)

Source: Deloitte Center for Health Solutions 2015 Survey of US Health Care Consumers.

Deloitte, "Top 10 health care innovations: Achieving more for less."

"we're developing a care pathway, laying an operational model and then a service model on it with intelligent clinical decision support underneath. We're building a model so that each area has the same foundational elements.

"Transformation is really exponential. The first year is about laying the foundation, the second is service-line essentials and the third is achieving the Triple Aim. In the near term, we'll be managing a different system of care."

NewYork-Presbyterian: right provider, right patient, right time

Peter Fleischut, MD, Senior Vice President & Chief Transformation Officer for NewYork-Presbyterian, a New York-based, academic integrated healthcare delivery system.

NewYork-Presbyterian

Peter Fleischut, MD, SVP & Chief Transformation Officer, NewYork-Presbyterian

"The title of Transformation Officer reflects a lot of work we're doing around standardization and virtualization," says Fleischut. "Virtualization is key to finding alternative ways to deliver care leveraging technology. Telemedicine allows us to get the right provider to the right patient at the right time."

Utilization of technology like Machine Learning and AI also—at least in embryonic fashion—serves transformation, says Fleischut, who reports to CIO Daniel Barchi.

In what may be emblematic of industry-wide change, the Chief Transformation Officer has a variety of titles reporting to him, including Karol Wollenburg, VP of Pharmacy; Shauna Coyne, Director of Telehealth; and David Tsay, MD, Associate Chief Transformation Officer, who focuses on Machine Learning, AI and robotic process automation. Also his reports: Emily Satin, lead for NYP's Epic integration; Chif Umejei, Director responsible for IT integration for the David H. Koch Center opening in April

in Manhattan; Sofia Fatalevich, Director of Software Development; Gilad Kuperman, MD, and Bruce Forman Directors for Population Health and Informatics.

What also may be characteristic of executives in similar positions—at least in retrospect—Fleischut seems to have prepared for the job by old-fashioned cross-training. He has held several positions at NewYork-Presbyterian for 11 years: trained as an anesthesiologist, Medical Director of the operating rooms, Vice Chair of Anesthesiology, an executive in both quality and safety, Chief Medical Operations Officer and about four years ago became Chief Innovation Officer, focusing on new and emerging technology. Just a year ago Fleischut was named SVP & Chief Transformation Officer, focusing on "a lot more than technology," he notes, while keeping technology in the forefront. "We went from focusing on technology to people and process."

> **"***Virtualization is key to finding alternative ways to deliver care leveraging technology. Telemedicine allows us to get the right provider to the right patient at the right time.***"**

Telehealth across the Big Apple

NewYork-Presbyterian's top transformation strategies for 2018 include the opening of the David H. Koch Center for integrated ambulatory care, building the team of IT and clinical leaders to kick off NYP's Epic EHR integration and the launch of the pharmacy standardization initiative.

Expansion of telehealth is also a priority. About 18 months ago, Shauna Coyne, Director of Telehealth, built 50 telehealth programs that to-date have completed 15,000 encounters, including the provision of online second opinions in 46 states and 80 specialties. In 2018 he expects NewYork-Presbyterian telehealth encounters to climb to 100,000 involving other services like urgent care and pediatric care in New York, Connecticut, New Jersey and Florida.

And the health system has conducted nearly 5,000 video ED visits, an option patients are

given when they arrive and which enables them to be seen and discharged within 31 minutes compared to a standard ED visit of two-and-a-half hours. All NewYork-Presbyterian EDs also offer tele-psychiatry services. By integrating telehealth, imaging technology and its ambulance service, the academic health system created a successful mobile stroke program that allows patients to undergo CT scans in the ambulance. "Stroke patients can be diagnosed and treated in the ambulance," he says. NewYork-Presbyterian also just went live with telehealth services in its first Walgreens at 40 Wall Street in Manhattan, where patients can receive an instant examination, diagnosis and treatment of non-life threatening illnesses and injuries through the NYP OnDemand Urgent Care program.

Finally, for 2018, the organization will apply Machine Learning and AI to three main areas: to identify variation in practices; robotic process automation in HR, IT and finance; and Machine Learning for imaging, particularly to identify complex visual patterns.

OSF: Innovation + Strategy = Catalyst for Transformation

Michelle Conger, Chief Strategy Officer at OSF HealthCare, a Peoria, Ill.-based, 13-hospital health system serving Illinois and the Upper Peninsula of Michigan.

"As you would suspect, as Chief Strategy Officer, I have accountability to create, communicate, execute and sustain strategic initiatives. My team includes business development, marketing and communications, and the disciplines within the OSF innovation agenda including Jump Simulation, Research & Education, OSF Ventures, OSF Partnerships, healthcare analytics and performance improvement," says Conger, who reports to the CEO. "The intent is to include areas that have synergy, and those areas that contribute to strategy development such as our virtual care. It's really important I'm able to bridge the connection of innovation to strategy."

The organization chart of people reporting to her is complex. As part of the innovation function, Conger's current reports include: the VP of Performance Improvement; VP of Innovation Partnerships—with external

Michelle Conger, Chief Strategy Officer, OSF HealthCare

incubators and accelerators—and who also oversees pilots; CMO for Jump Simulation; Physician VP for Transformational Innovation; VP of OSF Ventures fund; and the SVP of Healthcare Analytics. Under strategy, her reports include: the VP for Strategic Planning; SVP of Marketing and Communications; VP of Business Development; and VP for Economic Development.

"Innovation is hard work to manage," Conger says. "You have to bring innovation from the outside in and also leverage expertise from the inside of your own organization. We have no intention of becoming a full incubator

> **"It's really important I'm able to bridge the connection of innovation to strategy."**

and tech-transfer office without a partner who does this at scale. It's a big undertaking."

OSF's CIO, a peer of the Chief Strategy Officer, oversees a broad scope that includes the areas of supply chain and facilities in a separate organizational function, although the two work closely in areas like analytics. Conger acknowledges sometimes there are tensions in areas of security, risk and the need for IT resources to accomplish our innovation goals. "I think most organizations are dealing with some other core philosophical dialogues around topics such as what should be in the core EMR, where do you wait for development but still make sure innovation is happening at a pace that does not put you at a disadvantage; how you effectively deal with cloud computing and other technologies."

Aligning innovation with mission

OSF's top strategic priorities for 2018 include "three big things," which the Chief Strategy Officer is "right in the middle of," she says: One, operational effectiveness, including cost reduction and achieving the top decile in quality and safety; Two, growth through strategic partnerships.

"Otherwise we can't offer population health," says Conger; Three, innovation. "Healthcare is primed for a significant disruption. Not understanding that will be to your detriment. We have a huge focus on innovation to align with our mission. The key is to manage innovation prudently. You can be innovative around anything and get lost in the 'cool factor,' rather than focusing on what will address your biggest problems as a health system."

Aligning innovation with OSF's faith-based mission means finding innovative ways to aid the underserved and poor. It also means focusing on the aging population, which in the Midwest means aging in place. "It's a big deal when the largest segment of the population's growth is over 65," she notes.

To help do that, OSF has sourced innovation pilots from accelerator Avia in Chicago and incubators MassChallenge in Massachusetts, Matter in Chicago and Plug and Play in Silicon Valley. For example, OSF has partnered with the University of Illinois College of Engineering to study the biggest factors resulting in high-cost, low-quality care impacting the poor. Lack of access to behavioral health is one of them, so OSF has adopted the use of SilverCloud to provide clients with an easy immediate evidence-based and supported behavioral health solution.

A partnership formed through Matter with Regroup therapy helps treat people virtually with higher-acuity behavioral issues using behavioral health providers. "These are very different types of care," she says.

To support aging in place, the OSF team selected the Pulse program at Mass Challenge, a pilot with a startup company that uses passive monitoring to predict issues that might arise with people who live alone. And, when a rural community hospital closed, OSF converted it to a free-standing ED and repurposed the hospital to co-locate with social service agencies as well as connect with other agencies using a community-based tool called Pieces.

Conclusion

As health systems migrate to a future where innovation, transformation and strategy are aligned with mission, they are increasingly guided by the vision of a slate wiped clean of traditional organizational constructs. They're not tinkering around the edges anymore. Far from throwing out the baby with the bath water, however, these increasingly large and complex U.S. health systems, like the SI member organizations featured in this *SI 2018 Outlook*, are building industrial-strength "deep states" that have acquired the girth, the intelligence and the experience to deliver what looks increasingly like community healthcare. Disruption is happening.

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