Philips Informatics: Bringing the vision of precision care to life in an evolving healthcare world

Digital transformation remains one of the great challenges facing healthcare. While the sector has been adapting to digitalization and virtual care delivery, the evolution has been somewhat piecemeal, as new innovations have entered the marketplace. The global pandemic has, however, accelerated the transformation. It has clarified the need for interoperability among IT systems facing a deluge of patient data – data often fragmented among various specialties, departments, and sites. Such inefficiencies have cost hospitals over $300 billion in value every year, according to a McKinsey Global Report.

As has been the case throughout history, challenge has led to opportunity. It has given way to optimism, and heroes have arisen. That is unquestionably the case in the healthcare sector, where a new breed of CIO is galvanized by the challenge to reinvent systems and processes. Clinicians, no less heroic themselves, also recognize that with improved data management, health networks will be able to streamline patient views and make care more effective than ever. Such advancement will enhance healthcare systems' efforts

to achieve the quadruple aim of improving the patient experience, achieving better outcomes, reducing the cost of care and improving staff experience.

Now more than ever, health systems are looking for enterprise-wide strategies that will achieve end-to-end data integration, driving precision care across the continuum. Such a vision comes not a moment too soon for CIOs like Henning Schneider of the Asklepios Hospital Chain, one of Germany's largest.

"At the moment, I would say that the IT department, and especially the head of IT, is the lonesome rider who," he says, "has to persuade a lot of people to use and to focus more and more on digitalization and to really believe in the digitalization."

As a result, he has had to serve as "some kind of evangelist … to bring digitalization into the healthcare system," recognizing the invaluable impact of integrated informatics on the quality and efficiency of care.

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It is, in short, an exciting time to take the lead, to forge ahead. Forward-thinking leaders like Leo Bodden, Chief Technology Officer at NewYork-Presbyterian, understand that and embrace the challenge.

"I think this is the best time for someone to be in healthcare IT," he says, "because of the level of disruption that we are in the middle of, the level of disruption that we are about to experience, and, if you like change, as I do, the transformation. I find this to be the most exciting time to be in my current business."

Key drivers to transformation

Even before the pandemic, the rise of healthcare consumerization was a force for change. And this continues to intensify today.

63% of the general population is seeking greater access to its health data, whether out of a desire for convenience, a yearning to learn more about themselves, or in order to take control of their health.

Another key driver is the pandemic itself. According to a January 2021 Frost & Sullivan Report, it has resulted in a marked increase in virtual visits, remote monitoring and the use of patient-engagement tools:

· **Nearly 35%** of patient interactions will be digital in 2021, up from 20% last year
· **20%–25%** is the expected growth rate this year in patient engagement management solutions, as health systems make the shift to virtual care

Benedict Tan, Group Chief Digital Strategy Officer for Singapore Health Services Private Limited, agrees that the pandemic has accelerated digital transformation, even calling COVID-19 "the transformation officer." The outbreak has fostered a need for greater interconnectedness, greater convenience and greater flexibility.

Moreover, Frost & Sullivan foresees as much as $2 billion being invested into enterprise imaging workflow efficiency, interoperability and analytics – and the global telehealth market reaching nearly $50 billion in 2021.

Various governments have already enacted measures to accelerate digitalization. The United States' 21st Century Cures Act, which loosens regulations on data exchange and interoperability, goes into effect on April 5.

France's new healthcare act, which was passed in 2019, also focuses on streamlined governance, improved interoperability and enhanced security. In addition, French president Macron has promised "a massive investment plan and an upgrade of the career paths will be put in place for our hospital system," according to Reuters.

In addition, Germany's Future Hospital Act earmarks €3 billion for digitalization (as well as emergency capacities and IT security), as it seeks to modernize its hospital system.

Collectively, there are many positive forces to help leaders overcome IT networks that are still mostly fragmented, especially in the interfaces among diagnostic imaging examination systems, PACS, patient management systems and analytics.

Key barriers to transformation

Early in the COVID-19 pandemic, the stagnation of the healthcare ecosystem was exposed. While IT innovations were available, the shortcomings of care models and regulations were barely addressed. Transformation was seldom prioritized, due to the immediate need for cost containment. Switching to a single platform requires considerable financial investment and internal buy-in, and it must deliver proven ROI.

And more data generation will only lead to more data governance. While this can be addressed by melding big data's power with self-service through data lakes, or by broadening access to enterprise data, further investment – and vision – will be necessary.

Experts predict: 5x more data around the globe by 2025 than in 2017

Another key barrier is the traditional preference for best-of-breed solutions, as opposed to an integrated suite. A best-of-breed approach may create advantages, yet result in far greater challenges with data sharing, IT infrastructure, clinical and operational workflow, and capacity management, which might conceal the benefits of digital transformation. "What is Digital Maturity in Healthcare?" Jacques Rossler, CIO at Cliniques Universitaires Saint-Luc in Brussels, Belgium sees digital maturity through 2 lenses. Inside the organization: "What processes are you supporting? Is your IT really an added value for the hospital or for the business you are supporting? And just not a cost but more something that you can rely on and where you can move forward".

And at the industry vendors level, Rossler thinks that an organization is more mature when able to manage "a mix of stable providers and startups, that you know that if they fail you will not be putting in danger the way you are treating your patients. When you are able to do the difference and to manage that risk, then you are also more mature".

Ultimately, the lack of a fully integrated, interoperable, and secure set of harmonized systems keeps data, clinicians, and workflows siloed and inefficient. This challenge is exacerbated by the shift from point-of-care transactions to care delivery that spans the entire care pathway and extends into the home.

Devising a strategy to manage a mix of virtual and in-person engagement, and management tools, remains a significant barrier to digital maturity.

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Leo Bodden, Chief Technology Officer, NewYork-Presbyterian

Making the transformation happen together

"Healthcare transformation does take a village," Bodden says. "If I'm asked whether I'm the mayor or an unsung hero, I would actually say neither. I would consider myself more of a poll reviewer of healthcare transformation. I keep talking to the organization and keep saying, 'Transformation is coming.' Now the question is gonna be, Do we transform ourselves or does someone else transform us?"

In the healthcare space, this transformation is built upon aggregating data from various devices and systems to the point of care. Once data is captured and contextualized from all sources, clear and effective care pathways can be achieved. Only when the silos are shattered and every shred of information is accessible, can clinicians do their best work, delivering care and comfort to patients.

"The IT systems now hardly talk to one another," Tan says. "So what we all need to do is to modernize the architecture for the IT systems and make sure that it can talk to one another, it can interface, integrate, and support a more efficient workflow and processes for the patient."

Forward thinking leader Tan says "I've always emphasized that healthcare, has to be a high touch, and high-tech industry". He explains "we can do a lot of digitalization, to then use digitalization to improve efficiency of our doctors, our nurses. Present information in a way that would help them deliver better care, faster care and free them up to deliver the kind of high touch care that the patients deserve.

While many CIOs share this bold vision, tomorrow's leaders are the ones acting on it. Uniting treaters — and data — and turning challenge into opportunity. And leading the way to a greater quality care.

"What I find most pivotal with COVID-19 is the fact that we were able to do so many things, so fast," says Leo Bodden. "We eliminated barriers, … all barriers, so regulatory barriers, physical barriers, logical barriers were eliminated and it allowed organizations to provide services almost unimpeded. … I'd think that as a nation, [if] we start thinking about all the things that we were able to do, how fast we were able to do those things, we're gonna take a much harder look about some of what I would consider, now, artificial limitations that have been imposed on healthcare and have ultimately limited the transformation, and the change, and the improvements that we so desperately need."

Bringing healthcare IT leaders' vision to life

With interoperable solutions and deep clinical expertise, Philips helps healthcare IT leaders bring to life their vision of precision care. By delivering integrated, secure and agile informatics that go beyond imaging — and beyond the enterprise.

As an HIMSS-certified partner, Philips co-creates a customized roadmap that will ensure clinician success in an ever-evolving digital world. Philips works as a trusted partner, helping Healthcare IT leaders adapt and advance digital health transformation at defining moments in a patient's journey. This, in turn, paves the way for precision care.

Philips offers flexible business models and managed services through Software as a Service (SaaS), which can be extended to everything from Technology as a Service, Infrastructure as a Service and beyond, through subscription model or fees per study. The cloud deployment and adoption will further facilitate this trend.

"It depends on what specific application you are aiming for," says Jacob Visser, CMIO at Rotterdam's Erasmus Medical Center. "If you have a low case load, let's pay per case. If you have a very unpredictable case load, then you may think about a license model. It really depends on the situation." Philips is making this tailored approach possible.

That's why they are partnering with each customer to guide innovation, co-create business models and adapt to the local need of a community. With one primary goal in mind: Improve 2.5 billion lives by 2030. Together, we can make this a reality.

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