

The role of IT in healthcare – IT Web 11 November 2019

Tech is proving itself in the medical sector worldwide. What can it do for South African clinics and patients?

After state capture, healthcare is arguably the biggest issue in South Africa right now. The National Health Insurance (NHI) Bill has been submitted to parliament. It outlines an ambitious plan to re-engineer the inequalities between the private and public health systems, bringing universal healthcare to all, along the lines of the United Kingdom's NHS. NHI has its critics, and could yet take decades to implement. But its naysayers need to pause and consider a new report from the Competition Commission, which highlights just how bad a deal customers currently get from private insurers and service providers. Whichever way you look at it, healthcare in South Africa is sick – and many are looking to modernisation and technology to offer a restorative shot in the arm.

How is IT being used on the ground at the moment, though, and what is its potential to change a complex and bureaucratic sector? *Brainstorm* convened a roundtable of experts to find out.

Global trends

Local issues aside, the increasing use of IT in healthcare is a global megatrend, says Luis da Silva, MD of software and billing specialist Healthbridge. “Microsoft, Apple, Amazon and Google are all investing billions of dollars into healthtech,” he says. “There’s a whole wave of technologies coming into this sector.”

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Yao Ayivor, BCX

Much of the technology, Da Silva continues, such as wearables and mobile phone apps, helps patients to get involved in their own healthcare and reduce the cost of treatments by enabling at-home monitoring, for example.

“Traditionally in healthcare, the patient is the most disempowered party,” agrees Andrew Brown, deputy managing executive of Altron MediSwitch. “Knowledge sits with the healthcare providers, while health schemes control the money. The patient does what the doctor says and pays monthly, but what’s happening, that hasn’t happened before, is an engagement with information.”

Some signs of this are non-medical. Thomas Weiss, head of SAP, health and digital solutions at T-Systems South Africa, points out that private hospitals are investing in technology in order to win customers. “Hospital groups are competing for patients,” Weiss says. “Why is there free WiFi in hospitals? So I can watch Netflix from my bed. The technology isn’t the problem, the tech is there and it works; it’s a question of which stakeholder is the strongest.”

“If you’ve been to Inkosi Albert Luthuli Central Hospital, it was built in the ‘90s and it’s still one of the leading hospitals for medical technology in the world,” says Muhammad Simjee, co-founder, A2D24. “It’s like the digital future and it works to perfection. What I’m wondering is if we’re in a fixed line versus mobile situation. We’re still rolling out the

equivalent of fixed lines and analogue phone cables for hospitals. Are we missing out on the opportunity to go straight to mobile?"

While there are innovations such as Mama Mobile (a maternal health messaging service) and Pelebox (an ATM-style machine for dispensing medicine), the procurement processes for public health at the moment aren't working well.

"We have great technologies that could be used for disease management, but if you want to make the nation healthier, where does that start?" asks Lubalalo Mnyaka, MD at Aflu Med Healthcare. "Most of the time, IT solutions are designed by IT companies. Where is the patient or caregiver in the development of that solution?"

"There are two types of CTOs today," says BCX' healthcare specialist and sales manager, Yao Ayivor. "The old school ones will use what they know to solve a problem; the new school CTOs want to disrupt with blockchain and technology. But the problems that are faced in healthcare are business problems: it's not about the technology architecture...it's about the framework, putting the customer's customer – the patient – first. That's what NHI is trying to address. We know how to do that through the tech trends, social media, mobility, analytics and cloud, but if you don't have the right infrastructure, where do you begin? If the aim is to be patient-centric, but there's no law to govern it, the market will do what it does best – milk it until someone does provide governance."

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The same applies to technical standards, Ayivor continues, if consistent statistics and analytics are going to be achievable in the sector. "Standards need to come from government," he says. "Then, we can all go ape and design systems knowing that they can talk to each other."

The data problem

Attendees agree that the most important thing NHI can deliver for technologists who want to use their knowledge to improve healthcare outcomes is strong regulations and frameworks that can allow tech solutions to scale and balance competing interests.

"The private sector has a single challenge – it wants to fill beds," says BCX' Ayivor. "The public sector has three big challenges: it needs to improve the health of the nation, create jobs and deal with litigation, which is huge. Trying to solve all three in a single solution, that's when it gets difficult."

This is compounded, says Altron's Brown, by the tendency to see healthcare as a monolith rather than a very complex industry. "What a radiologist does is completely different to a pharmacist. Yet when we design IT systems, we try to smash them all together. It's like saying auto manufacturing and banking and creating a system that makes them more efficient."

One of the biggest challenges in the public sector, however, is lack of access to data, which could be used to find these efficiencies. "There are very basic problems that we need very basic data for," says Brown. "Do we know, for example, where we should be sending drugs to in KwaZulu-Natal and when?"

He highlights examples in the Western Cape, Gauteng and the UK's NHS where centralising records is helping to create efficiencies. Most agree that electronic patient records are a vital first step in modernising the system.

“There’s a disconnect in the environment,” says Simon Spurr, CEO of Healthcloud SA. “We don’t have the foundational layer that is a digital record of the nation. All of us build solutions, but we don’t have that baseline framework, which would underpin a national regulatory system.”

Although much of the discussion around NHI has been focussed on its impact in the private sector, there was also concern about the level of investment needed to bring public hospital IT networks up to the state needed for digitalisation to work.

“How are public hospitals going to be uplifted?” asks Altron’s Brown. “They need serious capital inflows to get them to the point where they can capture patient records. The private sector has done it because it has to, for billing, but I’m not hearing that discussion in the public sector.”

While centralised records could be game changing, they also present a sizeable security and privacy risk, especially when IT maintenance and patching can’t be guaranteed.

“You’re only as strong as your weakest link,” says Royal HaskoningDHV’s senior architect for healthcare Naeem Cassim. “In one province, there are 32 hospitals with different levels of hardware all tied to one single repository of data.”

There are many technology solutions that can improve healthcare outcomes, such as AI for diagnosis and imaging. Cassim, however, says: “We’re dealing with hospitals that are partially built and not maintained, new technology can’t plug into their systems. Some don’t even have backup power supplies. In Tembisa, there are many wards without a single computer, rotas are still being produced on a piece of paper.”

Hospitals don’t have enough control over their own budgets, Cassim adds, with implementing agencies often controlling IT spend.

Similarly, the roundtable attendees identify deep problems with change management, and several describe situations in which expensive IT deployments had been abandoned by staff who quickly reverted to their traditional working practices after a new system had been put in place. Some suggested the number of these was as high as 70%.

Often, systems have been designed for data capture and not for the actual users.

“My wife broke her foot and went to casualty,” says Da Silva. “It took 135 clicks to check her in.”

“The one factor in healthcare is that you have the doctor as gatekeeper,” says Brown. “They’re highly intelligent, they don’t have lots of time and they expect everything around them to work for them and improve what they’re doing. Bringing doctors along can have the single biggest effect in hospital change management.”

Despite all the challenges, however, our roundtable was confident that tech implementations in South African healthcare will get better and deliver positive outcomes for the nation. Partly for that very reason.

“What we’re seeing is that the average age of doctors and practice staff is dropping dramatically,” says Healthbridge’s Da Silva. “They have a different perspective, and the opportunity to get them to adopt tech solutions is increasing.”