

Influence of digital technology on healthcare

Digitally-delivered offerings improve accessibility of care

Lynette Dicey | Business Day | 29 April 2021

IN YEARS to come Covid-19 will be remembered not only for its losses, but also for the gains it precipitated - many of which are steeped in technology and have resulted in considerable wins for patient care and private healthcare.

“The decision of the Health Professions Council of South Africa to allow phone or video consultations with doctors and other practitioners during the Covid-19 crisis resulted in a flurry of online health care consultations, which has served the upper end of the South African health care market particularly well,” says Patrick Lubbe, CEO of the National HealthCare Group, a fully accredited health care administrator and managed care organisation.

“Unfortunately, with the cost of telecommunications being prohibitively high in our country, many South Africans are still left out in the cold. This is where more affordable communications platforms, such as WhatsApp, which is used by the majority of internet users, can fulfil the desperate need for connectivity.”

Popular platforms like WhatsApp have allowed healthcare service providers the opportunity to provide more affordable and accessible services, he says, explaining that National HealthCare Group has been leveraging mobile communication and chat commerce technology so that patients can have virtual or face-to-face consultations with a GP through a product called MediClub Connect™.

“This primary healthcare offering differentiates itself through delivering health care using a cellphone and a series of WhatsApp prompts to pinpoint potential health care issues. The low-cost service provides members with online interactive access to doctors and nurses on WhatsApp, physical consultations with doctors on referral, and all prescribed medication along with other key services for a maximum of R95 per employee a month. It gives members an effective way to connect with a health professional from home,” says Lubbe. Pointing out that affordability is a huge factor for business, Lubbe says it is worth noting that for less than the daily minimum wage, workers can now have access to private healthcare for an entire month. “It makes economic sense that employees at all levels of an organisation should have access to quality primary health care. It is also creating opportunities for general practitioners joining our growing network by opening up an untapped market.”

The past year has delivered some tough learnings for many local companies, not least of which was the need for safe, quality primary health care services. Practical and user-friendly technology applications which provide the benefits of private medical services to the low-cost segment of the market make sense in this environment, says Lubbe.

The uptake of a tech-savvy yet simple solution was almost instantaneous as it was fulfilling a considerable need for more accessible healthcare, while empowering individuals to monitor their health closely. The virtual medical consultation service, which was launched at the height of the Covid-19 pandemic in May 2020, went on to reduce the cost of primary healthcare cover beyond all expectations for corporate clients and their employees.

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Pandemic highlights role of technology in patient health

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THE adoption of digital technologies was accelerated by the Covid-19 pandemic in most industries, including in healthcare. Although the healthcare industry has been slower to adopt digital technologies than some other industries, the pandemic forced it into the future with the result that several new medical technologies were rolled out at scale in a relatively short space of time.

Telemedicine was the biggest winner. Research firm Forrester says healthcare providers must prepare for a “new virtual-first mode of operation”. It predicts that virtual healthcare visits represent a \$46-billion opportunity for healthcare providers and insurers in 2021 in the US alone. In fact, says Forrester, virtual care will become part of the core operating model for healthcare organisations to the extent the word “virtual” will fall away.

Although Covid-19 was the driving force behind the greater demand for virtual care, Forrester says consumers will demand it going forward given that they have become accustomed to the convenience it offers. In a local context, telehealth solutions allow people convenient access to care even if they live in remote rural areas. However, healthcare providers need to understand that virtual care is not a stopgap measure which means workflows must be optimised like any other care setting.

Innovation and Digital Business Manager at Siemens Healthineers Darryl Petersen agrees the pandemic has highlighted the role technology plays in bringing together patients and providers. “It acts as an enabler for optimised efficient care, assists with streamlining processes and supports care providers with analysis and outcomes.” Large technology providers that have not traditionally competed in the healthcare space, he adds, are increasing their footprint in this area. Data-driven healthcare has significant potential for improving treatment options and patient outcomes. Consultancy firm Bain predicts healthcare’s big data market will reach nearly \$70-billion by 2025. The challenge, however, will be to ensure the ability to transfer and process one healthcare organisation’s data to another organisation. Digital patient monitoring has seen an uptick during the pandemic driven by the greater adoption of wearable technologies and assisted by at-home diagnostics and remote clinical monitoring. Petersen says the device market is growing exponentially, in the process putting the responsibility and the power of monitoring one’s health back into the hands of patients. “I had a personal experience where monitoring my heart rhythms using my smart watch saved my life, with the result that I got cardioversion done in time to prevent a stroke or heart attack,” he says. Wearables are likely to have even more purpose in the future with wearable continuous glucose monitors due to become the norm for diabetes patients.

Nicolette Mudaly, head of Product Strategy at Altron HealthTech, says a single patient digital record allows a healthcare practitioner to have a holistic view of a patient’s history and therefore make a more accurate diagnosis and prescribe more appropriate treatments. “A single digital record could even reduce healthcare costs by avoiding duplicate tests as a practitioner would have sight of a previously conducted test,” she says.

Bertalan Mesko, author of *The Guide to the Future of Medicine*, believes that artificial intelligence (AI) has the potential to redesign healthcare completely. In 2020 it was reported

that Google's DeepMind artificial intelligence had outperformed radiologists in detecting breast cancer.

The benefit of AI in healthcare, explains Petersen, is that it helps generate actionable insights to improve treatment quality and healthcare organisation efficiency. "In radiology, for example, AI can act as a companion to increase productivity and quality in diagnostics for chest CT scans and X-rays, brain MRIs, prostate MRIs, radiotherapy and Covid19 test, among others." He adds that robotic process automation, on the other hand, assists by freeing up teams from mundane, monotonous, often easy to automate tasks, and creates consistency and accuracy for processes, as well as creating opportunities for fine-tuning existing skills as it lifts the burden and time spent on smaller tasks and allows more focus on more complex tasks and procedures.

According to Mesko, robotics is one of the most exciting fields of healthcare. In recent years developments in this area have included surgical robots, disinfectant robots and the first exoskeleton-aided surgery in 2019.

Virtual reality has similar potential and is already being used to train surgeons. According to a Harvard Business Review study published in 2019 surgeons trained on a virtual reality platform performed 230 percent better than surgeons who were trained traditionally: they completed the procedure an average of 20 percent faster and completed 38 percent more steps correctly in the procedure specific checklist. The study concluded that virtual reality may offer an important educational tool to augment surgeon training and continue to offer patients the very best care.

Another technology positively impacting healthcare is 3D printing which allows for implants, prosthetics and devices to be aligned and customised to the exact specifications of a patient. 3D printing is also now being used for cranial and orthopaedic implants and custom airway stents as well as for complex open-heart surgeries. Technology is being increasingly utilised in the hospital environment. Mudaly says time will tell whether healthcare costs are positively or negatively impacted by the increased use of technology although, in theory, improved efficiencies should ultimately lead to cost savings.

"There is no question the use of technology in healthcare is leading to improved quality of care and better patient outcomes," says Mudaly. "It's about things as simple as improving the communication and flow of patient information through a patient's healthcare journey or, at the other end, through the use of AI clinical decision-making tools based on clinical best practice. Interoperable platforms and technologies are growing as more people understand the power of leveraging individual capabilities and information for a more valuable insight or offering."