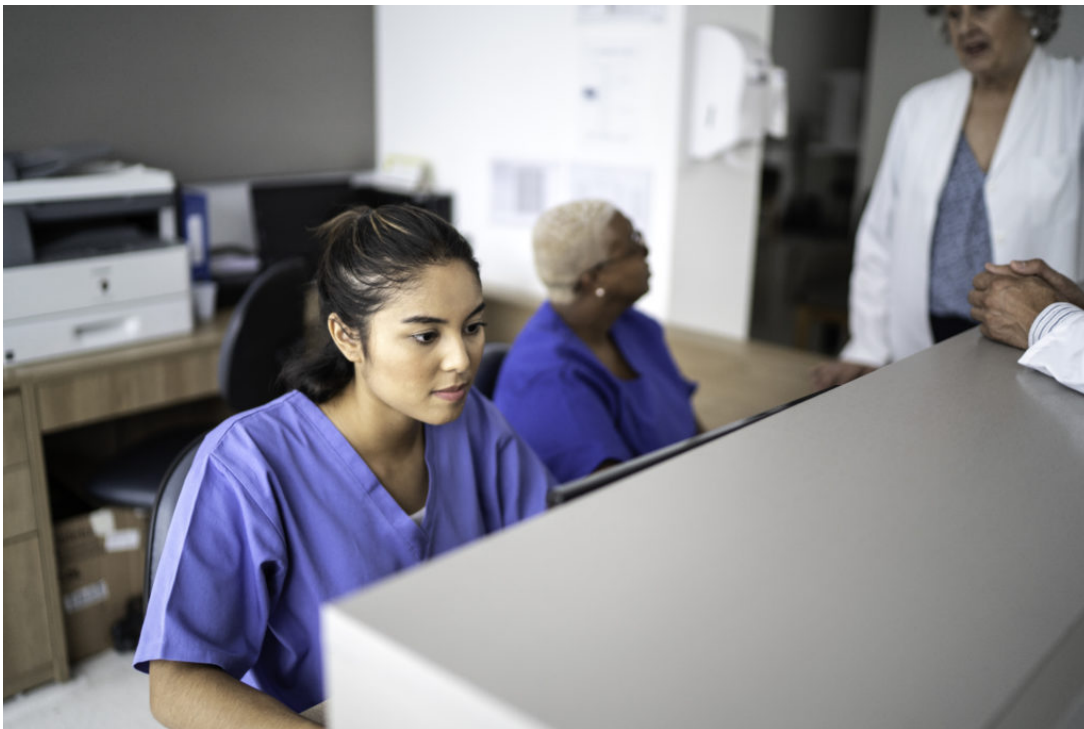


Documentation capture, Healthcare AI

How the cloud can drive Australia's digital health transformation

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The COVID-19 pandemic has drastically changed the nature of healthcare. Not only has it forced an acceleration in the industry's digitisation, but it has also put in motion a behavioural shift among Australian patients. The pandemic has well and truly pushed our healthcare ecosystem along on its transformation journey, and cloud solutions have played, and will continue to play, an instrumental role in this. Healthcare organisations need to better understand the potential of cloud applications before they can prioritise the adoption of new solutions. So, what does the cloud have in store for healthcare professionals?

We are at a pivotal moment in the history of healthcare, where a combination of major events and trends are deeply impacting the industry.

[In a recent study](#) we conducted among 1,000 Australian patients earlier this year, more than one in four respondents (27%) said they are ready to turn away from face-to-face appointments as their preferred method for accessing medical advice and treatment. In addition, less than half of Australians (48%) said that they would choose to rely solely on face-to-face appointments post-COVID, indicating that the shift in behaviour is likely to be a lasting one. People are now embracing new, technology-powered care models such as telehealth—models that already existed but were adopted at a much slower rate at the hands of patients' reluctance to change their healthcare habits.

The Australian healthcare sector must consistently anticipate, and adjust to, a combination of macro and sectoral trends that call for the implementation of alternatives, optimisations, and improvements. With [an ageing population](#), Australia is in increasing need of medical resources to treat chronic conditions, as well as eldercare facilities and services. Unfortunately, estimations on future medical resources are trending in the opposite direction. Studies show that Australia could be [short of 123,000 nurses by 2030](#), and that under current policies, there will be [a shortfall of more than 9,000 full-time general practitioners](#), which is almost a quarter of the current GP population.

In order to manage these upcoming challenges, and balance the potential impact of these macro parameters, the industry needs to generate efficiencies and optimise the way it operates in many aspects—a transformation that cloud solutions have the power to drive.

Why is the cloud so important?

The cloud has been the catalyst for acceleration in the digital transformation of many sectors. With applications and software running in the cloud, large investments in on-premise data centres and technology stacks were no longer necessary. Software-as-a-Service models then emerged, making digitalisation both more affordable and accessible to a larger number of organisations. With increased pressure to innovate rapidly and be more agile, organisations are enjoying the ability to use “on-demand” software and applications to answer their ever-changing needs, particularly with pandemic and post-pandemic organisational models in mind.

With more processes, products and services becoming digitised, organisations generate and own large volumes of data that can be monitored, analysed, and measured. From here, they can extract interesting insights that support the identification of potential optimisations for different aspects of their operations. Similar benefits can be unlocked by enabling different systems, software and applications that are hosted in the cloud to communicate and even “collaborate”, exchanging mutually beneficial data in real-time.

This real-time data exchange and “crunching” is the fuel that artificial intelligence (AI) and machine-learning (ML) solutions run on. There are many instances where AI and ML have allowed us to speed up or fully automate processes that once required significant human resources and cumbersome, and often manual, processes. Without the computing power offered by data centres and cloud models, it would be expensive and complex to democratise the use of AI and ML across different sectors, and automation would be limited.

Cloud solutions also have the following benefits:

- **Flexibility and mobility:** cloud solutions are accessible anywhere there's an Internet connection available. This provides flexibility for teams that need to work remotely or virtually and enable new services such as telehealth consultations.
- **Scalability:** cloud services are not limited in computing power the way on-premise systems could be. They can easily cope with peaks in activity and fast growth in volume of users by constantly adjusting the amount of computing power needed to support users.
- **Security:** cloud solutions are hosted in data centres with advanced security services that would be complex for organisations to manage themselves. That includes firewalls, data encryption, attack mitigation and access management services.
- **Advanced technologies:** the cloud enables the use of advanced technologies such as Artificial Intelligence and Machine-Learning. They can help drive better medical outcomes, advanced treatment and more patient engagement in the process.
- **Cost saving:** SaaS models facilitate progressive implementation and shorten the purchase cycles, while reducing capital expenditure and administrative overheads in healthcare organisations.

How does this translate in the healthcare industry?

The industries making up our economy are at different stages of cloud adoption and maturity, and the healthcare industry has traditionally been slow to adopt new digital technologies and innovations. Although the pandemic has been a catalyst for change, the sector is still to enjoy the full potential of cloud computing and related technologies—that is, [78% of technology leaders](#) are reporting improvements in productivity since adopting cloud services. With healthcare facing potential headwinds in the short to mid-term, a larger adoption of cloud solutions could generate the efficiencies that would make the next few years a smoother sail. Here are two examples showing how.

Reducing the admin burden

Insider Intelligence estimates that [30% of healthcare costs are associated with administrative tasks](#). Artificial Intelligence solutions can help better manage certain aspects of admin that healthcare professionals and organisations have to deal with. One example of which is the use of speech recognition solutions to capture clinical documentation faster. In our study, nearly two thirds of Australian patients said they were open to the use of artificial intelligence solutions during their consultation to produce clinical documentation, and a large number even highlight the potential to speed up appointments (58%) or help their doctor focus on the diagnosis (47%).

Cloud-based clinical speech recognition platforms such as [Dragon Medical One](#) enable clinicians to capture the patient story much faster, simply using their voice. Speech recognition can help transform the way doctors, nurses and patients interact with each other, and allow clinicians to keep accurate and complete records with less time invested. Because it is hosted in the cloud, practitioners have the flexibility to capture the information when and where it is the most convenient for them.

Healthcare coordination

Healthcare coordination is critical to ensure different practitioners have access to a single, up-to-date, easily accessible overview of a patient's medical history. It helps doctors understand who they are treating and improve decision making and continuity of care. It also removes the pain for patients with complex health profiles in gathering their medical information every time they meet a new practitioner.

In Australia, My Health Records (MHR) was designed with this objective in mind—for Australians to easily access their health information. Although the pandemic has triggered an increase in MHR adoption and usage, it doesn't always offer a comprehensive overview of a patient's medical history, partly because using MHR is optional for both patients, and practices and clinics.

MHR may not be the silver bullet to healthcare coordination, but cloud technology holds the promise of a better connected and coordinated ecosystem, creating the possibility for healthcare professionals and healthcare information systems to exchange patient data and information. These are only two examples of potential cloud applications in the sector, and the pros of a broader implementation of cloud solutions across the healthcare board could drive a deep transformation that will remove outdated processes, whilst creating new innovations and efficiencies. If you want to learn more about the opportunities afforded by the cloud in healthcare, download our '[Australia's digital health transformation and the cloud](#)' whitepaper.

Tags: [Dragon Medical One](#), [Cloud](#), [Burnout](#), [COVID-19](#), [Digital healthcare](#)

More Information

Learn more about the cloud

Find out how the cloud can drive Australia's digital health transformation

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About Dr. Simon Wallace

Dr. Simon Wallace is the Chief Clinical Information Officer (CCIO) of Nuance's Healthcare division in the UK and Ireland. Simon has worked as a GP, hospital and public health doctor in Brighton and London. His interest in health informatics began in the 90s when he spent a year at the King's Fund investigating the impact of the internet on shared decision making between patients and their healthcare professional. For the past 15 years, he has worked for a range of organisations including Bupa, Dr Foster, Cerner Corporation and GSK across a range of technologies which include electronic patient records, telemedicine, mobile health and lifestyle devices. Simon has a keen interest in the voluntary sector, recently completing a 7 year term as a Trustee for Fitzrovia Youth in Action, a children and young people's charity based in London.



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