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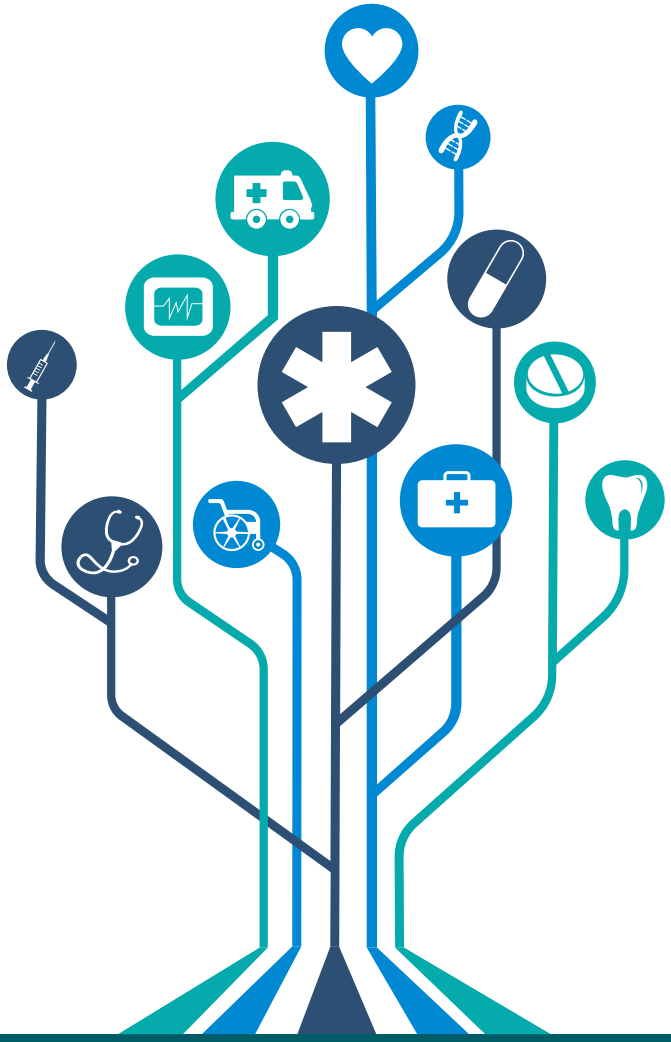

Roadmap to resilience:
A post pandemic vision of healthcare delivery

Written by

ECONOMIST IMPACT

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A three-part series that looks at the future of resiliency in Australia and New Zealand's health systems.

Article 1: Resilience in health systems

The ongoing coronavirus disease 2019 (covid-19) pandemic, first reported in China in December 2019 and subsequently declared as a pandemic by the World Health Organization (WHO) in March 2020, has caused unprecedented disruptions to health systems and health care delivery across the globe. Since then, countries have scrambled to respond to, mitigate and adapt to constantly evolving challenges that the pandemic has presented across all facets of life. As a primary line of response to the crisis, health systems and healthcare personnel have faced immense pressure and challenges to cope with the mounting demands placed on healthcare delivery, both in absorbing shocks associated with the pandemic and ensuring the continued functionality and provision of routine health services.[1]

'Resilience' in healthcare has been a hot topic in recent years, with several frameworks being put forward to assess, measure, and quantify this concept in relation to health systems. Hollnagel et al.[2] define resilience in healthcare as "the ability of the healthcare system (a clinic, a ward, a hospital, a country) to adjust its functioning prior to, during, or following events (changes, disturbances, and opportunities), and thereby sustain required operations under both expected and unexpected conditions." This article, the first of three in a series titled *"Roadmap to resilience: A post pandemic vision of healthcare delivery"*, aims to comment on the resilience of the health systems of Australia and New Zealand in the context of the current pandemic. Using Wood's concepts of resilience defined as rebound, robustness, and sustained adaptability[3], the article offers a perspective on how some facets of resilience have been incorporated successfully and other areas that can be improved.

Resilience as rebound

While the pandemic has exposed the lack of preparedness and capacity of most health systems to deal with a crisis like covid-19, it has also presented countries with the opportunity to plan and build back better for the future. In a recent commentary, Clay-Williams et al. use the Resilience Analysis Grid (RAG) framework – based on the concepts of monitoring, anticipating, responding, and learning – to evaluate Australia's health system response to covid-19.[4] Successes include the introduction of new and adaptive models of care in response to emerging and evolving needs, advances in telehealth, and the advent of remote monitoring and consultation – essentially bringing the 'hospital into the home'.[4] In attempting to prioritise the balance of care between patients with

Philips insight

According to the 2021 Future Health Index, Australian healthcare leaders predict that, in three years from now, 24% of routine care will be delivered in smart hospitals, rural facilities, remotely and at home, a shift largely rooted in the new ways the healthcare system has had to adapt to the pandemic.[6]

Source: Future Health Index

covid-19 and patients with other comorbidities, new facilities and protocols have been put in place, leaning on the support of the private healthcare system for additional financial and human resources, as and when needed.[5]

To quote Albert Einstein, "in the midst of every crisis, lies great opportunity"; the covid-19 crisis has provided an unprecedented opportunity for Telemedicine to advance. Experts interviewed suggested that the expansion in the delivery of telemedicine since early 2020 will be sustained beyond the covid-19 crisis. The success of this shift, however, will depend largely on the effective adoption of digital health technology and innovation, which will be the focus of a subsequent article in this series.

Resilience as robustness

The pandemic has harshly brought into sharp focus some of the existing problems and limitations of health systems. In Australia, poor integration of healthcare service provision, fragmented health funding, and specialties operating in silos have led to disjointed and inefficient care provision in the past.[7] The speed of reform and adaptation that has occurred during the pandemic as a result of cooperation between public and private hospitals, and state and federal governments, provide hope and a model of resource sharing and collaboration that could benefit the health system moving forward. The pandemic has also promoted and rewarded innovation at a much faster pace, momentum which should be capitalised upon for pushing grant and ethics approvals in the research and health technology spaces.

A shift in priority, attention, and funding from tertiary care to prevention and health promotion is also warranted.[8] Amid the pandemic, health systems were overwhelmed with the surge in demand for covid-19-related care, often at the sacrificial expense of routine and/or chronic care provision. New Zealand's health system managed this through the postponement of elective medical procedures.[5] In the long term, it is important to recognise that shifts in care priorities driven by an ageing population and NCDs will require significantly more resourcing and funding at the tertiary level. Preventing or delaying the progression of these diseases will both benefit patients as well as reduce pressures on the health system, particularly if or when another health crisis comes along.

Professor Adam Elshaug, Director of the Centre for Health Policy at The University of Melbourne, Australia notes that "the pandemic has required us to rethink some of our funding models about health care, which will go some way towards improving resilience." Australia's current model for funding hospital-based services is referred to as activity-based funding, a mechanism for funding providers based on the type and volume of services that are provided. Professor Elshaug reflects on how the pandemic has increased interest in alternative ways to fund and deliver care, "while it's hard to say 'how do we release funds from in-hospital care to allow care to occur in the community or the home or virtually?', that conversation is now starting to occur. There are real shifts towards releasing those activity-based funds from inpatient settings for use outside of the hospital setting."

Philips insight

According to the 2021 Future Health Index report, 66% of healthcare leaders in Australia reported being confident in the ability of their hospital or healthcare facility to deliver quality care, while 84% reported confidence in the ability of their healthcare system to deliver quality care as they look towards the future of healthcare delivery.[6]

Source: Future Health Index

Resilience as sustained adaptability

Health system structures can be notoriously inflexible due to a multitude of bureaucratic processes and devolved governance, particularly when public and private sectors work as separate entities with seldom communication between. At the very beginning of the pandemic, these structures hampered government efforts to coordinate an effective, system-wide response, but this quickly shifted to individual hospitals, healthcare facilities, and the public working together and playing their own important role. Examples of this were seen in the implementation of electronic contact tracing in Australia[9], and the set up of Technical Advisory Group comprising of public health officials, infectious disease experts, and epidemiologists by the Ministry of Health in New Zealand, to provide daily communication updates on the risks and threats posed by the virus to government officials, media and the public.[5] Where resource management was concerned, even wealthy countries suddenly found themselves lacking sufficient personal protective equipment (PPE), masks, and ICU capacity, with a fatigued and burnt-out health workforce enduring a significant toll on their mental and emotional health.[10] Resource stewardship and capacity building have since become a priority in the management of health systems, together with systems thinking that accounts for the complexity and multiplicity of stakeholders involved in health care delivery, as well as for managing unpredictable surge demands on the system during a crisis. Prompted by the urgent need for accessible diagnostic testing and vaccination against covid-19, funding priorities and models have had to evolve rapidly, particularly to absorb the costs of providing these services at no cost to the public, as was done in Australia and New Zealand.[5] These are important and valuable lessons in planning for resilience in terms of sustained adaptability of the health system.

This brings us to the question: **Can resilience and sustainability truly co-exist?** Is the very goal of staying resilient in managing healthcare services incapable of delivering it sustainably? In a summit organized by the Partnership for Health Sustainability and Resilience, on the topic of Building Sustainable and Resilient Health Systems in a Post-Covid World in March 2021, health economist Professor Alistair McGuire from the London School of Economics spoke about the definitions of health system resilience and health system sustainability, ending on the note that *"no health system can be sustainable without being resilient".*[11] While resilience is often defined in terms of response to short-term shocks, sustainability is usually measured in terms of longer timeframes and involves response to long-term stressors on the system. Several elements that are important in the sustainability of health systems are also common to ensuring resilience, particularly in terms of climate and the environment.[12]

The Partnership's interim report also highlights ways in which resilience and sustainability can be at odds with each other; for instance, boosting the technical efficiency of the health system could improve sustainability while also reducing the system's flexibility or redundant capacity, thereby affecting its resilience. Similarly, the immediate, reactive focus on absorbing the short-term shocks of a crisis should not divert resources and attention away from longer-term plans for ensuring accessible, affordable, and quality healthcare provision during times of 'normalcy'.[13]

Philips insight

According to the 2021 Future Health Index, 38% of healthcare leaders say embedding sustainable practices will become a top priority for their hospital or healthcare facility in the near future, compared to 4% today.[6]

Source: Future Health Index

Are there lessons from the pandemic response that could guide future thinking and planning for resilience and sustainability? The exponential increase of single-use PPE and critical medical supplies, with the accompanying surge in incineration and waste disposal that the pandemic has brought about could act as a driving force behind the implementation of sustainability practices in hospitals. Cost-savings are a further motivator, particularly the large savings derived from reduced energy use, switches to green technology, circular economy business models, and sustainable design for durable equipment and reusable medical devices. Telehealth and remote or virtual care are expected to further contribute to these cost savings as well as reducing overall carbon emissions, through reducing patient travel for consultations and care.[14]

"Time will tell whether these [changes] are going to become entrenched models within our healthcare system, or whether they're just going to be through covid-19. What might contribute to additional resiliency going forward is some evaluation to know what is effective and efficient. I'm not necessarily sure that will happen either, because at the moment, everyone's just in response mode."

Professor Adam Elshaug, Director of the Centre for Health Policy at The University of Melbourne

In looking ahead and bracing ourselves for the future, there are some important lessons about resilience building to be learned. The first is the importance of flexibility to constantly adapt to changing needs and situations. While the pandemic has raged on for the last 18 months, new variants, outbreaks, and emerging epidemiological data on the virus, disease progression and vaccine efficacy have meant that response strategies, surveillance efforts, and isolation and/or lockdown protocols have had to shift and change rapidly, sometimes overnight. Health system capacity and infrastructure have to be ready to handle heightened demand, while also ensuring that quality service delivery for non-pandemic related care continues. A great example of this was the nationally coordinated online system in New Zealand, set up for 2,500 retired or non-practicing health workers to rejoin the workforce to assist in outbreak management.[5] Quick and clear communication at all levels will be key to ensuring alignment and efficiency, whether it be between governments and the general public, or between different groups handling different aspects of a response, such as border controls and hospital isolation wards.

The second is the importance of cooperation, both within and across health systems and countries. As Wang *et al*. write, "the capabilities to isolate threats and maintain core functions and to leverage outside capacity through collaboration with regional and global partners are crucial for a resilient health system."[15] While this last year has seen remarkable examples of global collaboration in terms of vaccine development and the sharing of epidemiological data, most countries have taken a largely nationalistic approach in their response – a stance that will not work effectively when the next global health crisis hits. International cooperation and public-private partnerships will be critical in such instances.

Finally, in light of the ongoing uncertainty and unpredictability of the pandemic, strengthening governance to ensure accountability and transparency in mitigation and adaptation plans as well as building human and financial capacity, sourcing alternate supply chains, and relying on local resources, are both urgent and critical.[16] The adoption of relevant guidelines, such as the ISO 31000 for Risk management and ISO 31050 (currently under development, for emerging risks) could enable governments and organizations to improve crisis planning and decision-making through adopting a broader view on risk and using risk management principles.[17]

Professor Stephen Duckett, Health Program Director at Grattan Institute describes how Australia failed to reflect on and learn from their own, and the world's experience of covid-19. "We've had a couple of waves of the pandemic and between November of 2020 and March 2021,

we were relatively covid-free. We could have used that time to step back and think – what are the lessons of the last six months? but regretfully we didn't do that''. To improve sustainable resilience, health systems need to reflect on what collective and practical lessons from the covid-19 crisis can be developed for better preparation, response, and resilience in the future. Professor Duckett highlights that "typically in a public health emergency, you step back and think about the recovery phase. And the recovery phase includes thinking about what you could have learned from the hurricane, tornado, or pandemic. We really didn't do that and we need to learn from our experience to move forward."

The current crisis is far from over and we do not know when the next one will be. For health systems to stay resilient in the near future and further down the road, significant changes in planning for and approaching health service provision will be necessary if countries are to successfully transition from response to recovery to building back better in the future.

Philips insight

The Future Health Index (FHI) is a research-based platform commissioned by Philips. It is designed to help determine the readiness of countries to address global health challenges and build sustainable, fit-for-purpose, national health systems. Since its inception in 2016, the FHI program has used credible research to derive actionable insights that have initiated dialogue across the industry, with the aim to drive change.

The 2021 Future Health Index report is based on proprietary research with almost 3,000 healthcare leaders across 14 countries. Now in its sixth year, the 2021 report reveals the challenges healthcare leaders have faced since the onset of the pandemic and explores where their current and future priorities lie. It outlines a new vision for the future of healthcare, shaped by a fresh emphasis on partnerships, sustainability and new models of care delivery, both inside and outside the hospital.

To read the full methodology, please visit: https://www.philips.com/a-w/about/news/future-health-index/research-methodology.html

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