The new world of post-pandemic healthcare

Subhead: So much has changed but fears remain that the old ways of doing business could creep back.

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During 2020, healthcare was turned on its head as long ignored technologies such as telehealth and digital therapeutics (DTx) became essential services, clinical trials finally embraced decentralised models, and rules preventing all of these were thrown onto the fire-pit.

Yet how many of these innovations will survive in their current form once the pandemic is merely a distant bogeyman for children remains to be seen.

In the US, there are fears that reimbursement funding for telehealth will diminish, rules that had been relaxed, such as those making it possible to run virtual consults across the country (without needing a licence in each State), will reappear, and that COVID-19-specific waivers that boosted flexibility in the healthcare system will be retracted.

And yet the pandemic also taught companies they needed to diversify supply chains: Moderna, for example, built a vaccine factory in Switzerland because it knew a country with just 10 million people would be unlikely to hoard vaccine doses, and they wouldn't have problems if the US refused to allow exports. Regionalisation of supply chains is now a fact -- even in Australia where medical supplies maker Softmed spent $30 million last year hastily erecting a new PPE production line in Melbourne.

Exports who spoke at the 2021 HLTH digital healthcare conference in Boston were cautiously optimistic -- but made it clear there is considerable uncertainty in the US over how the coming 12-24 months will play out for the new guard of post-pandemic health innovations.

A hybrid of old and new

COVID-19 has been a catalyst for a different gateway to health, as new solutions to problems like workforce challenges, reaching the unreached, and increased efficiency are set to remain.

"It gives a platform on which to build a digital future in healthcare…now it's time to think beyond that," said Mass General Brigham chair, Joseph Kvedar at HLTH 2021.

The challenge however is coming from providers who are realising how important the brick-and-mortar business model is to being paid. "There's a lot of pressure for us to go back to in-person because that's how we get paid," he says. "Which makes the future of telemedicine uncertain."

Kvedar says there are questions yet to be answered around a hybrid model of care, such as rethinking basic infrastructure expenses such as exam tables and offices, and how triaging is done and by whom -- receptionists will now need to include nurses who can assess a patient over the phone.

Hybrid care is also different for different specialities. Ophthalmology saw the greatest reduction in visits in April 2020 yet is one of the most in-person reliant practices. Behavioural health, which is booming, saw the least decline.

What needs to happen for hybrid models to continue growing in the US is clarity around reimbursement, as some State-based and smaller funds say they won't continue to do so; clarity around licensure -- the fact that in normal times a range of medical professionals need a State licence to operate in each US State; and an awareness that patient monitoring, which itself is very different care model to telehealth, hasn't taken off yet and will need to be prepared for.

But if the pandemic taught healthcare systems anything, it's that they can move quickly when necessary.

Caregility's Wendy Deibert says implementation has sped up and adaptation is easier than before. Instead of 12-week timeframes the question is 'how soon can we have it?'

"Technology has evolved to where we have to be: patient-centric, bridging the gap, orchestrating care in a way that makes it easy for the patient. We have learned how to use the technology, keep everybody connected, and deliver care in ways we had not imagined," she said at HLTH 2021.

That was the good; this is the ugly

If 'unprecedented' was the word of the year in 2020, 'misinformation' must be 2021s.

Former FDA head Scott Gottlieb is desperately worried about the erosion of trust in public health authorities which occurred due to the rapid evolution of information.

"As public health people, we need to recognise that we need to make the case for why what we did was right and why it's important for public health professionals to lead a pandemic," he said at HLTH 2021.

The distrust of expertise preceded the pandemic, he said, but it's worsened now with 25-30% of Americans losing faith in healthcare authorities.

"The solution to the pandemic does not work with only 75% of people on board," Gottleib said.

The dawning of telehealth, and other technologies

Telehealth and the companies seeking to provide it have been available for over a decade, but it was stay-at-home orders in 2020 that proved their worth.

The list of upstart technologies that got their start in 2020 includes remote monitoring technologies, which themselves require a new -- hybrid -- form of care as patients begin to monitor their own health in real time, and medical professionals figure out how to make sense of the flows of data coming into their consulting rooms.

Telehealth alone has lowered cancellation rates and has the potential to lower clinic overheads, as infrastructure such as office space can be shared among medical staff or reduced entirely.

What changed was not the technology, but acceptance among medical professionals that it was an acceptable way to provide care and also provided a better experience for patients.

In Australia, telehealth was made possible by its inclusion on the Medicare Benefits Scheme (MBS) in early March 2020, and was attended by the urgent introduction of electronic prescriptions and home delivered medications. The temporary COVID-19 MBS items have been extended to the end of 2021 as the government works on a permanent scheme, one it says is part of a complete revamp of the Medicare system.

It is less certain what Australian telehealth will look like as a permanent feature, with the original rules already pulled back to mean patients can only do telehealth consults with their regular doctor, that is, someone they've seen physically in the last 12 months.

In the US, there is less certainty -- not around the survival of telemedicine as a service, but how it's paid for.

During COVID-19, regulations were rolled back that enabled more than 80 new decentralised services to be possible, unlocking both a range of new providers, such as telehealth behemoth Teladoc, and more innovation.

Yet because of the US's complex health payment systems, there will be a reckoning on how the new technologies will be reimbursed, and also how they need to be reimbursed in order to make it in the new world of value-based care. (See our coverage on digitally enabled models of care for a deeper look at telehealth and technology reimbursement).

"A lot of people said telehealth was just a flash in the pan, we knew we had to do it, we're going back to the office thank you very much," says Kvedar.

"[But] we're in a world where we're going to see this happen and be an embedded part of care delivery… but the question is who is going to deliver the services."

And yet the telephone is analogue

Patients and, reluctantly, medicos are singing the praises of telehealth (just try to get in-person consult with your Australian GP these days), but some are not.

Ex-Google engineer and CEO of digital assistant health tech company Syllable, Kobus Joost, says 88% of people use the phone for healthcare compared to 1% in other industries, and yet the phone is an inefficient means of communication.

He says 15-30 of calls go unanswered. Phone conversations also lead to inaccuracies entering systems, such as incorrectly spelled patient names.

"Healthcare is very analogue due to insufficient promotion of digital options, patients are still repeatedly being told to call, patients are presented with too many digital options and digital implementation is poorly implemented. Appointments are unnecessarily cumbersome and therefore expensive," he says.

The solution, according to Syllable, is to completely digitise bookings, scheduling and other administrative tasks.

The digital transformation of healthcare and the creation of retail-like experiences that "delight" the new consumer-patient have been thrust to the forefront because of the pandemic, says Global Healthcare Solutions director Aashima Gupta.

One area of digitalisation is billing: insurer Blue Shield in California is digitising claims using automated processing, artificial intelligence and machine learning technologies to improve the accuracy and the timeliness of billing information.

Are clinical trials out of the lab for good?

Lockdowns meant clinical trials around the world had to get out of the lab and into the home.

"COVID-19 provided the crucible to look at the capabilities made possible through better use of software and data," said Dr Amy Abernethy, president of Clinical Research Platforms at Verily Life Sciences and former principal deputy commissioner at the FDA, at HLTH.

She says a number of regulatory flexibilities -- not including the US$18 billion Operation Warp Speed and US$14 billion Coalition for Epidemic Preparedness Innovations projects to boost COVID-19-specific vaccines -- put in place around the world allowed for decentralised clinical studies, and sponsors have started to embrace virtual solutions.

But she cautioned that data quality and participant safety need to be front of mind, and regulatory flexibilities will end.

"It is the healthcare community's responsibility to go back and crosscheck the implications for data quality and ensure we design for safety."

But decentralised trials are one area where pandemic-created changes will not be put back into the box.

Not only could the influx of technologies into the once-staid sector speed up clinical trials and reduce costs, but they also offer a whole new range of data from real-time monitoring to new patient populations who, by dint of not living near trial sites or not being treated by the 'right' doctors, were never able to access trials -- or be accessed by recruiters.

The new paradigm, according to management consultant McKinsey, is to meet patients where they are by using tools such as electronic consent, telehealth, remote patient monitoring, and electronic clinical-outcome assessments (eCOAs), as well as in-clinic monitoring for hybrid trials, although not necessarily at a specific trial site.

Remote site selection and patient enrolment are areas where several Australian companies are using AI-backed algorithms to expand the options available to sponsors, speed up the process, and reduce costs. Others are providing disease-specific tools to allow clinical trials focused on conditions such as diabetes, for example, to decentralize or include a hybrid option.

It's unlikely clinical trials will go entirely virtual but COVID-19 has allowed sponsors and CROs to include new decentralised techniques into the process.

Health equity is on the radar

Much has been said of the fact that COVID-19 highlighted the inequities in healthcare systems.

In Australia, it was highlighted by the lack of multi-language messaging early on about the risks of COVID-19 during Victoria's 2020 outbreak, and today is playing out in locations such as the Northern Territory where overly slow vaccine campaigns have been beaten by misinformation.

In the US, it coincided with large Black Lives Matter protests and called attention to basic medical disparities, such as the fact that pulse oximeters are more likely to generate errors when used on darker skin which led to low blood-oxygen levels in Black people being missed.

Compared to White Americans, American Indian and Alaska Native people were 2.4 times more likely to die from COVID-19, Hispanic people 2.3 times as likely, and Black Americans 2 times as likely to die, according to CDC data in September 2021.

But systemic racism in the healthcare system is being recognised as a result of the pandemic, and major hospitals such as Mass General Brigham are considering how racialised medicine will work.

While experts at HLTH agree that technologies like telehealth helped broaden the reach of organisations during the pandemic to disadvantaged people, the challenge will be not to increase the digital divide between people who don't trust or can't access tech tools.

The US government moved to advance health equity in 2021 by expanding coverage in Medicare and Medicaid, health insurance for the over-65s and the poor respectively.

Chiquita Brooks-LaSure, administrator of the Centers for Medicare and Medicaid Services (CMS) says although some 17 million Americans who are eligible for social health insurance are yet to sign up, the uptake during an open enrolment period earlier in the year was considerable.

They are also doing fewer eligibility redeterminations and considering how auto-enrolment might look.

COVID-19 changed healthcare investing

To get an idea of just how much money is flowing into healthcare, venture firm 7wireVentures had written US$21 billion in health investments by October 2021, compared to US$20 billion for all of 2020, says partner Alyssa Jaffee.

Deal volume is up 60-70%, larger and larger cheques are being written, and non-traditional investors are eagerly buying into the sector.

Intriguingly, the way health tech companies, in particular, are going to market is also changing: where once it was all B2B, when a payer or provider would pick up the service or product after a long period of proven product-market-fit, today those buyers are moving in sooner and the companies themselves are going first to consumers.

Andreessen Horowitz general partner Julie Yoo says the buyers are recognising categories such as DTx and telehealth are here to stay and if they don't partner or sign contracts early, rivals will move in or the new business could even pose an existential threat.

Overturning the traditional B2B go-to-market strategy is B2C2B, where a health tech company establishes relationships with patients first, before leveraging them to sign commercial contracts.

Yoo says it's not uncommon to see seed stage companies that have both users and revenue traction.

But there are problems arising in the post-pandemic health investment rush.

Different categories are becoming crowded; Yoo questions how many companies will have the runway to make a real go of their business. And companies are an order of magnitude bigger than they once were when approaching investors and seeking exits, which limits the number of potential buyers and could see young companies pushed into going public before they are ready.

Investors like Yoo and Jaffee worry the febrile US health investment scene is forcing young businesses to move too quickly, promise follow-on solutions when the first isn't fully baked, accept money from investors who are not the right partner for their business, and permanently ratchet up the speed of product iteration in a sector known better for lengthy timelines and conservatism than Silicon Valley move-fast-and-break-things mantras.

And yet there is a large long-term benefit emerging from the pandemic: the entrance of a range of non-health talent into the sector -- people who have a burning passion to fix broken systems but who are also bringing new perspectives on how to achieve that goal.

Health really is everyone's business

It's not just startups and health tech companies benefiting from non-health talent getting involved -- the pandemic has seen the sector embrace people and entities it historically may have ignored.

The NBA is a stark example of an organisation that led the way globally in running COVID-19-safe events and putting medical technology to new uses.

Dr Leroy Sims, the NBA's senior vice president, medical affairs, said they knew they had to stop the indoor, impossible-to-social-distance sport once the first positive case appeared.

"That's where the planning happened that led to a convergence of medicine, technology, and data but all in the backdrop of a social justice movement that was happening. Our players are 80% Black. The Black Lives Matter movement was happening, and we had to think how can we be attuned to and sensitive to what was happening and the role that our players wanted to play, but get them back on the court safely," he said at HLTH 2021.

The organisation created a player bubble in Orlando, Florida, and used Oura sleep and activity tracker rings and pulse oximeters to collect a range of data, and Disney MagicBands that incorporated temperature and test results to give or restrict access to certain areas, all in consultation with players. The NBA even became a medical authority, publishing studies using the data gleaned from its infection control and health activities.

Partnerships were the more common method of involving external experience.

Walgreens partnered with Uber to get people to vaccination and testing stations and engaged influencers and celebrities such as singer John Legend to spread the word on social media, and groups like 100 Black Women, 100 Black Men, and faith organisations.

"We have to go to those who [specific demographics] are willing to listen to," said Rina Shah, Walgreens group vice president of pharmacy operations and services.

"We needed to step outside of the boundaries of just healthcare to get the message out of where you can get testing or vaccination services, why it's important, and what you need to do."

CIC Health created selfie stations at vaccine clinics to give individuals a platform to tell their vax story to their personal networks, while community pharmacy McKesson brought in the organiser of the

Boston Marathon to figure out crowd control at vaccine stations and how to move thousands of people through a tight space in a short time.

COVID-19 was the making, and the breaking, or both new and old ways of doing health. Experts at the coalface of the industry hope they can take the best of the new innovations forward, and eventually leave the worst of the old behind.

“We need to take the kind of innovation and resiliency and learning that we've learned during this pandemic, and then move forward very quickly. We came together as a city, as a State, as a community, as a scientific and clinical community to fight the pandemic, but what we need to understand is that there will be many more challenges to come. That's the challenge we have. We can do it," said Anne Klibanski, president and CEO of Mass General Brigham hospital.

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