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COVID-19 and the Acceleration of Digital Health in APAC

Although the COVID-19 pandemic is an unprecedented public health crisis on a global scale, the outbreak is serving as a pivotal catalyst for greater adoption of digital health. Healthcare stakeholders are implementing drastic measures, including swift deployment of digital health tools, in an effort to curb the spread of the virus, ease the current burden on the healthcare system and maximize capacity.

By sheer necessity, governments and regulators have also reduced the barriers to participation and uptake for remote engagement of consumers, enabling access to care despite social distancing measures. Furthermore, a technical guidance paper, published by the World Health Organization (WHO) on April 1, 2020 on strengthening health systems against COVID-19 recognizes telemedicine as an alternative model for delivery of care to ensure the continuous running of essential healthcare services.¹ The pandemic has thus undeniably wrought new, technology-enabled ways of working in what were formerly highly institutionalized “legacy” settings.

Over the coming weeks and months, COVID-19 will accelerate the digitalization of health systems to a new level as healthcare stakeholders adopt a more urgent, no-holds-barred strategy to stem the rising tide of infections. We predict that new ways of working and behaviors, forged and refined in the heat of battle against COVID-19, will not be easily put “back in the box.” This increasingly digitalized reality will force a paradigm shift in the healthcare ecosystem, as major healthcare stakeholders

(healthcare providers, pharmaceutical companies and medtechs alike) rethink new ways of working, as well as step up resiliency during “peacetime.”

In this *Executive Insights*, L.E.K. Consulting and Galen Growth explore how emergency measures in Asia Pacific to adopt digital health tools as a result of COVID-19 will accelerate broader digital transformation, and we highlight key considerations for the healthcare industry in planning for a “new normal.”

Regulatory changes to mirror health system shocks

When we look east, it is clear that even before this health crisis began, China was already becoming a tech-savvy leader and leapfrogging other markets in digital health adoption. China’s government, for example, has been exploring the idea of telemedicine since 2014. This has included the release of several mandates that not only provided more clarity around telehealth regulations but also expanded reimbursement coverage. Strong uptake has followed, with an overwhelming 94% of China’s health professionals having adopted digital health tools, such as the use of electronic patient health records and telehealth in their practices as of 2019.^{2,3}

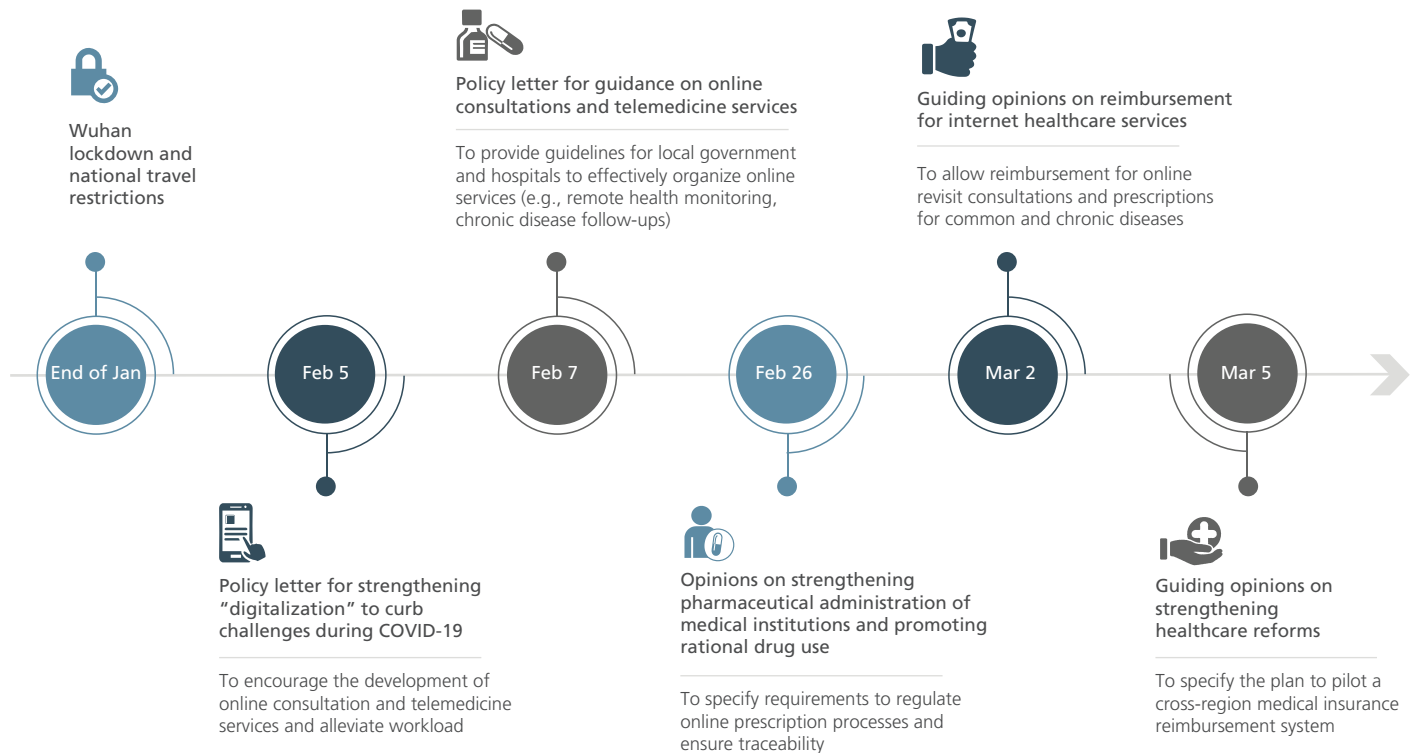
Since the COVID-19 outbreak emerged, authorities in China have stepped up emergency digital health measures to alleviate the burden on the public healthcare system from an intense influx of patients. The central government began routinely issuing a list of “guidances” once it became increasingly apparent that an infectious outbreak was ongoing on a widespread basis (see Figure 1). Uptake has followed from a consumer perspective as well — Ping An Good Doctor (one of the largest telehealth companies in China), for instance, reported a 10x increase in newly registered users after the emergence of COVID-19.⁴

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Figure 1
Key regulatory policies announced by China's government in light of COVID-19



Source: National Health Commission, National Healthcare Security Administration, State Council of PRC China

Other jurisdictions within APAC and globally followed suit, acting swiftly to increase healthcare capacity and enable innovation through digital tools to combat the outbreak. The Australian federal government lifted reimbursement restrictions on telehealth services, allowing Australia's Medicare-subsidized telehealth access to general practitioners and some specialists.⁵ In Japan, the Ministry of Health, Labor and Welfare eased regulations to allow online medical consultations and home delivery of prescription drugs.⁶ The U.S. Food and Drug Administration has also clarified that it does not intend to regulate mobile apps that are intended for public surveillance and communication related to COVID-19, in order to allow new digital health technologies to emerge and tackle the pandemic.⁷ These measures constitute a significant shift away from regulators' prior ambivalent stances that data protection and privacy concerns limited the potential benefits that digital health tools could provide. As a result of the crisis, patient centricity has trumped interests of incumbent stakeholders, thus opening the gateway for greater adoption of more sophisticated digital health technologies.

Digital everything

While telehealth is playing a key role as one of the digital tools being employed to combat COVID-19,⁸ the digital health landscape is in fact changing beyond remote consultations alone. COVID-19's rapid infection rate and flu-like symptoms make it difficult for doctors to distinguish a COVID-19 patient from someone who

has a regular bout of the flu. Contact tracing, as well as early symptomatic and asymptomatic detection and isolation, are thus key points within the COVID-19 crisis value chain that are currently facing high unmet needs. Any lapses in these areas place a healthcare system at a precarious tipping point of running at overcapacity, which in turn will prolong and exacerbate the nature of this crisis.

As such, the use of digital solutions in response to the COVID-19 pandemic cuts across various healthtech capabilities (see Figure 2) and spans all stages of the patient care pathway:

- Drug development:
 - The Institute of Materia Medica in Beijing has been collaborating with Canadian biotech firm Cyclica to identify and develop antiviral drug candidates for COVID-19 through its proprietary deep-learning machine MatchMaker™⁹
- Prevention:
 - In China, users can scan a QR code via popular apps such as WeChat and Alipay to register and inquire about whether they were in close contact with someone who was infected¹⁰
 - Singapore's contact-tracing app, TraceTogether, mobilizes Bluetooth technology to identify close contacts of infected persons and saw more than 500,000 downloads in one day¹¹

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Figure 2
Emerging digital solutions during COVID-19

Digital health solutions are perfectly suited to support patient access to treatment and can significantly reduce the pressure on the healthcare infrastructure both during and after the pandemic

	Patient-centric				Diagnostics-centric			R&D-centric	
HealthTech Clusters	Education	Triage	Telemedicine	Distribution	Chronic Disease Management	Point-of-Care Testing Diagnostics	Screening	Research	RCT
HealthTech Capabilities	<ul style="list-style-type: none"> Health Information Platform Consumer Education 	<ul style="list-style-type: none"> Medical Concierge Chatbots Track & Trace Apps 	<ul style="list-style-type: none"> Tele-consultation 	<ul style="list-style-type: none"> Consumer Market-places 	<ul style="list-style-type: none"> Digital Therapeutics Disease Management 	<ul style="list-style-type: none"> On-Demand Lab Tests Medical Diagnostics 	<ul style="list-style-type: none"> Medical Imaging Teleradiology 	<ul style="list-style-type: none"> Drug Discovery 	<ul style="list-style-type: none"> Research Clinical Trials
Startup Load*									
Patient Load**									

*"Startup load" refers to the volume of startups focused on that stage of the patient journey as a proportion of total volume; **"Patient Load" refers to the volume of patients within that stage of the patient journey as a proportion of total volume
Source: Galen Growth

- South Korean district governments send out alerts when a resident tests positive, including a detailed information log about the resident's day-to-day movements prior to diagnosis, traced using closed-circuit television or credit card transactions¹²
- Diagnosis: To speed up the diagnosis process in China and alleviate workload, artificial intelligence (AI) tools are being used to conduct computed tomography (CT) lung scans without the aid of a health professional:
 - Beijing-based Infervision's technology can diagnose a patient with COVID-19 in under 10 seconds¹³
 - Given that COVID-19 patients may require multiple CT scans during treatment, Ping An's smart image-reading system can help increase delivery care capacity in hospitals, as it is able to analyze changes in lesions on its own through AI technology¹⁴
- Treatment:
 - The Australian government introduced the COVID-19 Home Medicines Service, which allows vulnerable people to order prescriptions remotely without needing to visit a pharmacy¹⁵
 - Singapore now encourages use of teleconsultations for chronic diseases such as diabetes, depression and bipolar disorder¹⁶
- Rehab/monitoring:
 - Philips is ramping up production of its critical VitalWatch eICU Program, which allows remote monitoring of intensive

care wards from a central location so that hospitals can cope with the current clinician shortage in this area¹⁷

- VivaLNK, a Chinese medtech provider, deployed a remote patient monitoring tool aimed at automating patient temperature tracking at the Shanghai Public Health Clinic Center (a primary care center for COVID-19 patients)¹⁸

As the outbreak disrupts the ways in which providers, businesses and consumers alike operate, digital innovation is also being used to cushion the negative consequences of a global pandemic to supply chains and business-to-business ways of working across the healthcare value chain. After Wuhan commenced a lockdown, drone technology was used to transport quarantine materials, medical samples and medical supplies between hospitals, offering an efficient alternative to traditional transportation.¹⁹ Chinese automotive manufacturer SAIC-GM-Wuling reengineered its existing assembly lines to begin manufacturing medical face masks to help alleviate the nationwide medical gear shortage.²⁰ Pharma companies also migrated their crucial sales force function online to enable employees to avoid face-to-face contact with frontline workers while sustaining physician engagement. Novartis, for instance, has ramped up remote academic support to physicians. At the same time, it is important to incorporate creative approaches to online interactions to prevent direct promotional fatigue.

A step change — for good

While some may view digital health tools as a temporary plug-and-play option to alleviate the stress that COVID-19 has placed on the healthcare system, we predict many of these changes

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will remain for the long term, as shocks to health systems historically tend to be deeply ingrained. Take the 2003 Severe Acute Respiratory Syndrome (SARS) epidemic, which was a severely needed wake-up call to Asian nations that a proactive approach was vital for any future infectious disease outbreaks. Post-SARS, Taiwan established the National Health Command Centre, a central command post for public health authorities to disseminate information in a direct and transparent manner. Singapore and Australia have also realized the fundamental importance of streamlining exchange of information among different healthcare stakeholders. Both nations now offer COVID-19-related updates to residents via the popular mobile chat app WhatsApp, with the latter collaborating with software company Atlassian to implement a WhatsApp bot that can answer frequently asked questions.

Regulatory measures favorable toward digital health are unlikely to roll back easily after this crisis has passed, given that governments will look to step up health emergency preparedness for the future. The pandemic has shone a spotlight on some of the budgetary challenges with public healthcare systems, making digital an enticing means in the pursuit of more effective management and distribution of finite healthcare resources. Furthermore, as other stakeholders gradually adopt and increase their level of comfort with the vast plethora of digital health tools available in the market, we also expect to see enduring shifts in behavior for healthcare providers, physicians and consumers alike that will likely sustain a new “regulatory inertia” and mitigate any temptation to revert to old norms as the COVID-19 crisis passes.

Changing corporate priorities

Given that norms within digital health are evolving in response to COVID-19, companies can prime themselves for the upcoming digital revolution by rethinking strategies across product-service innovation, core organizational functions and ways of working. The previously nebulous “permission space” that constrained digital health players from operating freely in the healthcare industry is quickly being set aside, as governments and healthcare stakeholders have deployed all tools and resources available to fight this major public health and macroeconomic crisis.

As the world teeters on the cusp of digital transformation in the healthcare industry, key stakeholders can take proactive steps to evolve in tandem with the radically changing and increasingly digitalized healthcare landscape.

For product companies, including pharma as well as medical device and equipment manufacturers, the opportunity exists to embed digital in product-service innovation and across functional areas, including as part of customer engagement. For example:

- Pharma: Digital tools can be increasingly employed to improve patient and physician engagement by:
 - Focusing on building digital patient pathways to enable patients’ access to physicians and drugs across the entire

care pathway (awareness and prevention, effective triaging, diagnosis, and treatment)

- Strengthening digital engagement with physicians by driving awareness (e.g., through key opinion leader webinars, online scientific communities, interactive clinical trial presentations) or by offering seamless delivery of crucial functions (e.g., remote ordering/inventory stocking)

There is also a valuable opportunity to concurrently assess the extent to which the reliance on traditional offline channels (e.g., Salesforce) can be decreased. While some progress has already been made in embedding digital into commercial models during the COVID-19 pandemic, the decisions post-pandemic to rein in face-to-face sales teams in favor of digital engagement will depend on how consistently or cyclically restrictions are placed on access to healthcare professionals.

- Medical devices: Digital presents medical device companies with an opportunity to seize key wins, either by embarking on innovation of new products and services or by leveraging technology to increase operational efficiencies. For example:
 - Rethinking existing care management strategies in order to address shortages in manpower, reduce high provider costs and provide personalized care for more complex cases (e.g., Philips’ eICU software led to ~US\$5 million in cost savings for Emory Healthcare in just 15 months)²¹
 - Leveraging cloud-based solutions to streamline inventory management and reduce cost inefficiencies (e.g., real-time updates of key performance metrics, 24/7 inventory visibility to anticipate stock shortages)
 - Other opportunities also abound for medtech as customers increasingly gain comfort in a digital setting

Opportunities exist for other healthcare stakeholders as well:

- Providers: As care transitions out of the traditional hospital setting toward alternative sites to prevent overcrowding and provide better access to remote patients, there is an opportunity to use and integrate digital tools to manage and link different healthcare settings for providers:
 - Triaging and outpatient remote engagement tools to alleviate load on currently stretched healthcare services and resources
 - Increasing the use of electronic health records to allow clinicians better access to a patient’s medical history and provide more personalized care
 - Adopting interoperable clinical management systems to ensure seamless integration and more effective management of workload across different types of healthcare facilities

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- Payers: While payers have been relatively more proactive in adopting digital care management tools to ensure a hassle-free claims reimbursement process and improve the patient journey, there is still vast potential to replicate and expand existing service offerings:
 - Deploying standardized codes for different procedures to reduce administrative workload for healthcare providers during billing and claims reimbursement process
 - Increasing payee engagement by launching self-triaging digital tools for patients (through a website or mobile app feature) to use before seeking care
 - Increasing digital engagement with consumers to raise awareness of the range of health insurance plans available

Gearing up for a digital future

In summary, the adoption of digital health tools in Asia Pacific has mirrored the exponential transmission of COVID-19 and has far-reaching impact that is here to stay. The digital “permission space” significantly expanded in a single quarter, with regulators, healthcare practitioners, institutions and consumers banding together to use all means possible to fight the crisis. These shifts in behavior will accelerate, giving rise to new models and “go-to” providers at this unique point in time. The COVID-19 crisis and the digital health acceleration that has followed have also offered a view into where key unmet needs lie for healthcare systems and consumers, and where most value could be generated through digital innovation.

Pharmaceutical companies, medical device companies, providers and payers need to act now to stay ahead of these changes in a quickly evolving and increasingly digitalized world. Pursuing new operating models in a planned and purposeful way can also enable industry players to leverage certain fundamental advantages that these new models may offer, including lower costs to deliver products and services, broader access to patients and customers, more scalability of operations, and rapid adaptability in times of crisis or surge/drop in demand, among others.

There are various ways too for future leaders to move forward, whether it be through internal product development and innovation or partnerships to leverage external capabilities and leverage synergies, or via mergers and acquisitions. The current momentum could also serve as a catalyst to activate “data plays” that often go hand in hand with a digital offering and can secure long-term value generation. Players that are not proactive in joining the current industry momentum and do not align themselves with the core needs and expectations of consumers, physicians, healthcare systems and governments may find themselves without a seat at the table in the future.

It is likely that these observations and implications for Asia Pacific, where the virus first originated, will extend to other regions, as the pandemic has applied similar pressures on healthcare systems globally to curb disease spread and stretch health system capacity. L.E.K. Consulting is assessing the impact of the pandemic globally and will be exploring similar perspectives for the rest of the world in future publications.

Endnotes

- ¹ World Health Organization — Strengthening the Health System Response to COVID-19: <https://euro.sharefile.com/share/view/sbc0659718fd4c8aa>
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About Galen Growth

Galen Growth is the leading digital health intelligence and analytics provider to corporate institution and investors. Galen Growth believes the fastest, most effective way to scale digital health innovation is to be the preferred innovation partner for investors, corporations and startups to enable them to successfully navigate the complex healthcare ecosystem. Founded in 2015, Galen Growth has offices in Europe and Asia.

For more information, visit www.galengrowth.com.

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