Task Force 2
Our Common Digital Future: Affordable, Accessible and Inclusive Digital Public Infrastructure

PROMOTING DIGITAL HEALTH: ENVISIONING STRATEGIC PARTNERSHIPS WITHIN THE G20

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Abstract

Strengthening digital health systems has been a growing priority for the G20 since the 2018 Argentine presidency. The period during and after the COVID-19 pandemic has seen a definite crystallisation of four key concerns. These are the need to: (i) work towards greater consistency and alignment in digital health policies and standards across the G20 member states; (ii) establish stronger data protection and security measures for health data, while also creating opportunities to pool or share data for research; (iii) develop interoperable digital systems that make for a more seamless experience; and (iv) create mechanisms that enable a coordinated response to health crises. This policy brief introduces these four ideas, provides a short overview of related deliberations at the G20, and recommends eight actions that member states can consider undertaking to help build more robust and collaborative digital health systems. Each proposed action envisions a particular type of strategic partnership and joint intervention by the G20 nations.

The Challenge

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Digital health has the potential to revolutionise healthcare delivery by improving efficiency, quality, and accessibility of care.[1] The G20 countries, which account for 85 percent of the world's GDP and two-thirds of its population, are key players in shaping the global digital health landscape. However, collectively, the G20 has faced significant challenges in promoting digital health, including disparities in national digital health strategies, data protection and privacy concerns, interoperability issues, and insufficiently strong coordination mechanisms for joint responses to global health crises.[2]

The differing approaches to national digital health strategies across the G20 countries presents a primary challenge. In a 2019 study on the G20 countries, the Organisation for Economic Co-operation and Development (OECD) found that very few had comprehensive digital health strategies. Some countries differed on the standards that underpinned their strategies, while others differed on how they emphasised digital infrastructure, including digital identification, interoperability, and governance mechanisms.[3] While the situation has improved post COVID-19,[4] these disparities could lead to unequal access to digital health services and hinder cross-border collaboration. For example, a patient travelling from a country with advanced digital health systems[5] to one that lacks them may experience difficulties accessing their medical records or receiving consistent care.

A second key challenge is ensuring health data protection, privacy, and security. As digital health systems collect and process sensitive personal health information, it is essential to have robust frameworks in place to protect patient privacy and prevent data breaches. Without adequate data protection measures, patients may be hesitant to use digital health services,[6] which could impede the adoption of these technologies.

The need for interoperability is a third crucial requirement, particularly in a global context. In the European Union, for instance, a lack of interoperability between electronic health record systems was estimated to cost €1.1 billion per year.[7] The lack of interoperable systems across different countries and healthcare providers can

hinder the seamless flow of health data, impeding the provision of consistent care to patients who may have medical records in multiple locations. This challenge is further complicated by cross-border digital flows, as countries may have different data protection and privacy regulations.

Finally, the pandemic has highlighted the need for coordination mechanisms to facilitate joint responses to global health crises. Digital health has played a critical role in pandemic response efforts, including telemedicine, remote patient monitoring, and contact tracing. However, the lack of coordination between countries and healthcare providers can lead to uneven response efforts and hinder the effectiveness of attempts to combat global health threats.

The G20's Role

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Since the adoption of the 2030 Agenda by United Nations in 2015, interventions related to health at the G20 have increasingly included a focus on how digital technologies and innovations might strengthen health systems. The broad objective has been to leverage technology to move towards universal health coverage, and to advance efforts to achieve Sustainable Development Goal (SDG) 3 (ensuring healthy lives and promoting well-being for all) and its constituent targets (reducing maternal and child mortality, and mitigating the impact of air, water and soil pollution on health), as well as SDGs 2 and 6, which have a direct bearing on health.

The four challenges identified have emerged as standing priorities for the G20 since 2018, with members repeatedly highlighting the need to act on them. This is borne out by the leaders' statements and health ministers' statements issued during the five presidencies preceding India's tenure.

Promoting greater consistency and alignment across digital health initiatives: While countries have differing priorities and approaches to digital health based on the context within which they operate, the G20 has sought to build greater consistency and alignment across its member states with respect to digital health. Efforts to align and advance the G20's digital health systems have been an ongoing priority. During the 2018 Argentine presidency, G20 health ministers encouraged member states to operationalise digital health systems and telemedicine initiatives, undertake e-health collaborations, and share best practices around e-health implementation.[8] The 2019 Japanese presidency called for "strengthen[ing] health systems with a focus on quality" and promoting public and private sector technological innovation.[9] The Riyadh Leaders' Summit (2020) saw G20 countries highlight the need to make comparable digital health systems a key element of health infrastructure services.[10] During the Italian presidency in 2021, the G20 agreed by consensus to support voluntary health technology transfer hubs.[11] Under the Indonesian presidency, effecting digital transformations and building a resilient global health system were declared leading imperatives, with an emphasis on optimising technology to create a stronger global health system.[12]

Strengthening regimes for protecting health data: With respect to the management of health data, the Argentine presidency urged countries to **"**invest in adequate [health] data protection measures, with particular attention to avoiding misuse of personal data".[13] Under the Japanese presidency, the G20 Health Ministers' Declaration emphasised collecting, analysing, and reporting health data disaggregated to the greatest extent possible while respecting data privacy and security. It further encouraged implementing policy measures across the G20 to protect personal health data.[14] The G20 Leaders' Declaration that year went on to make a strong case for using health and other data for development and permitting cross-border data flows.[15] The Saudi Arabian presidency echoed these principles;[16] the Italian presidency reiterated that stronger measures for protecting health data were essential;[17] and the 2022 Bali Leaders' Declaration acknowledged nearly all the above elements.[18]

Fostering interoperable e-health systems: In recent years, G20 members have increasingly drawn attention to the need for interoperable e-health platforms and data-sharing frameworks as a critical enabler for stronger digital health systems. Building on the outcomes of the Health Working Group meetings in 2019, the G20 health ministers committed to work towards improving the interoperability of digital health information systems.[19] The following year, they observed that the "interoperability and governance of health data" was of foundational importance for improving trust.[20] Most recently, they pointed to the urgency of achieving the interoperability of G20 countries' digital vaccination certificates.[21]

Enabling a coordinated pandemic response: Since 2020, the idea of evolving a coordinated tech-enabled pandemic response has been central to the G20's deliberations on health. In 2020, the G20 health ministers endorsed the creation of a Digital Health Task Force and requested it to develop a 'Digital Health Pandemic Management' methodology. The latter would focus on facilitating joint responses by sharing best practices around digital tools and tech-based service delivery for pandemic management.[22] In 2021, the G20 leaders asserted that technological collaborations would be leveraged to support vaccine supply

chains and production in the interest of a concerted response.[23] These approaches were reiterated during the Indonesian presidency and the need to build "trusted global digital health networks" to address future pandemics was further underscored.[24]

Recommendations to the G20

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In light of the challenges to digital health interventions (as identified in this brief) and associated deliberations at the G20, the member countries can consider taking the following actions:

Develop a common minimum framework and exercise to protect health data

To maintain the trust of data subjects vis-à-vis the processing of health data, and to help in-country health systems secure the support and compliance of data subjects, G20 nations could design a common minimum framework and exercise to protect health data. This is especially important in the context of the unprecedented surge in healthcare data breaches during the pandemic.[25] The framework should consist of four levels of action. First, G20 nations must map their provisions for general and personal data protection, assess whether these provisions address the unique requirements of processing health data,[a] and if not, consider including health-focused amendments or creating new health-sector-specific laws to govern personal data. Second, G20 countries must review and strengthen the roles of domestic institutional data controllers tasked with ensuring the compliance of processors with the core principles of data minimisation and purpose limitation.[b] Third, cybersecurity systems must be strengthened to improve data security. And fourth, leading national health institutions should help integrate awareness of data protection and security into public health education. The G20's Joint Health and Finance Taskforce and Digital Economy Working Group could be entrusted with the development and implementation of this framework.

Draft guidelines for the cross-border exchange of health data to support research and policymaking

While some G20 nations have divergent views about cross-border data flows, there are definite merits

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a   For instance, the European Union's General Data Protection Regulation states that the processing of personal data should be regarded as lawful where it is necessary to protect an interest which is essential for the life of the data principal, or on certain other specified grounds of public interest or the vital interests of the data subject (e.g., for humanitarian purposes or for monitoring epidemics).

b   Only the minimum amount of data absolutely required for a predefined purpose must be used.

to the strategic, selective sharing of health data between member states. Shared data could help boost research, innovation, and policymaking. As an OECD study argues, "With the proliferation of electronic health data, cross-border collaboration is necessary as it is increasingly clear that research breakthroughs will require large, high-quality datasets that describe a range of determinants of health and disease."[26] A few successful models exist. Under a Nordic programme, for instance, Denmark, Iceland, Norway, Finland, and Sweden pooled their health data and biobanks, allowing researchers from these countries to benefit from larger sample sizes in various domains. Four Nordic countries have also shared data with each other and the UK to study cancer incidence among new insulin users.[27]

Following these models, the G20's Health Working Group could develop guidelines that encourage small clusters of member states to explore sharing health data for specific research purposes. The guidelines should provide for oversight mechanisms within the working group to ensure that the privileged nature of health data is maintained and processes for data aggregation and anonymisation are established. The G20 guidelines must also require participating member states to define (and adhere to) the primary and secondary uses of the shared data, and to ensure that existing data localisation laws or policies are not contravened. Finally, beyond the guidelines for potential partner nations, the G20 Health Working Group could lay the groundwork for harmonised approaches, standards and protocols for health data governance, and work towards an interoperable ecosystem where information can be easily accessed across borders.

Create a G20 digital health policy repository

A G20 Repository of Digital Policies was initiated during the Argentine presidency to support policymakers in the design and implementation of evidence-based digitalisation policies and strategies.[28] This repository has not been active since; neither is it readily locatable or accessible. This platform could be repopularised within the G20 and rejuvenated with a separate segment on digital health policies. Moreover, it could have a rotational system of ownership and be

maintained by the Think20 Engagement Group of the sitting G20 president. Alternatively, a specialised open-access G20 Digital Health Policy Repository (DHPR) could be built to enable the international sharing of knowledge and best practices. The DHPR could host member states' federal and state-level digital health laws, policies, strategies, and data protection laws pertaining to digital health missions and unique health identifier programmes.

Build joint mechanisms to support coordinated tech-enabled responses to global health crises

The establishment of a Global Epidemic Response and Mobilisation (GERM) team has been proposed as an institution that could be managed by the World Health Organization (WHO), be based out of individual countries' national public health institutes and WHO country offices, and "take the lead on creating and coordinating common responses".[29] While the GERM team is expected to operate on a global scale with a diverse workforce of about 3,000 full-time employees,[30] a more focused and nimble approach could be adopted by the G20. An international health-

tech-focused think tank collaboratively funded by G20 governments and staffed by public health experts, computer modellers, and digital health and data systems practitioners could be set up. The think-tank would be steered by the WHO, with the rotating host and secretariat being the country holding the G20 presidency. The body's mandate would be to devise models and methodologies for coordinated tech-enabled responses to pandemics and other large-scale health crises. It would also help identify related capacity gaps across the G20, serve the G20 secretariat and the health-related task force and working group in an advisory capacity, and offer research support to major global initiatives like the Access to Covid-19 Tools (ACT) Accelerator.

Prioritise sectoral digital public infrastructure for healthcare

Building on the prioritisation of digital public infrastructure (DPI) during the Indian presidency, the G20 should also promote the establishment of sectoral DPIs in areas such as healthcare. Health-related DPIs could be critical for the effective provision of services such as digitalised identification, digital health records, cash transfers, and other civil

registrations. Based on its experience of building India Stack and successful foundational DPIs such as Aadhaar, the Unified Payments Interface,, and the Data Empowerment and Protection Architecture, the Indian presidency has already constituted a Task Force on Digital Public Infrastructure for Economic Transformation, Financial Inclusion, and Development. Moving forward, this task force and other working groups should work towards instituting collaborative mechanisms that encourage knowledge-sharing, innovation, and public-private partnerships related to DPIs across sectors, including health. For instance, the G20 member states could facilitate the creation of a global knowledge hub for DPIs that allows countries to share experiences and learn from each other's successes and challenges. The availability of a hub with DPI use cases could also have the secondary effect of accelerating the development of essential infrastructure such as digital identity systems, particularly in low- and middle-income countries (LMICs). Once institutionalised, the focus on DPIs could serve as a steppingstone for the G20 to coordinate international funding mechanisms for related innovations, including in digital health

– while ensuring that these investments are sustainable and inclusive.

Establish centres of excellence for artificial intelligence and emerging technologies in healthcare

Artificial intelligence (AI) and other emerging technologies have tremendous potential to transform the way we approach healthcare. However, their successful integration into the healthcare system requires careful planning and collaboration across sectors. One way to achieve this is by establishing centres of excellence (CoEs) that specialise in researching, piloting, and implementing AI and emerging technological solutions for the health sector. The G20 member states could pool resources and jointly develop CoEs that ensure the ethical and inclusive development of health-tech, and drive innovation and capacity-building. By bringing together a diverse range of stakeholders, including public and private sectors, academia, and civil society, CoEs could catalyse change, provide platforms for sharing knowledge (within countries and across borders), and provide technical guidance and training on AI, its nuances, and its

real-world applications, to build skilled health workforces.

There are existing in-country models for such CoEs. For example, the UK has established several AI CoEs, including the Alan Turing Institute and the UKRI Centre for Doctoral Training in AI for Healthcare, to support the development and adoption of AI. Similarly, the Singaporean government has set up AI CoEs such as AI.SG and 'AI for Everyone' to promote AI-related R&D and training. Canada, under its Pan-Canadian AI Strategy, has invested heavily in AI R&D and set up multiple AI research institutes.[31] These organisational models and infrastructures, as well as the AI strategies of the G20 member states,[32] ought to be mapped closely in preparation for setting up multilateral health-tech-focused CoEs for the G20.

Establish a telemedicine task force

The G20 should establish a dedicated task force on telemedicine and remote care provision. The task force should be charged with identifying best practices and facilitating knowledge-sharing among G20 member countries on the use of telemedicine and remote care to improve access to healthcare, especially in low-resource settings. It should work towards developing guidelines for the ethical and responsible use of telemedicine; explore the potential of telemedicine to improve health outcomes and address challenges such as shortages of healthcare workers and geographic barriers to healthcare access; identify opportunities for collaboration and investment in telemedicine infrastructure and technology; and evaluate the potential for public-private partnerships to support the deployment of telemedicine solutions. Additionally, the task force should leverage the increased momentum of acceptance and normalisation of remote care during the COVID-19 pandemic to help accelerate the adoption of telemedicine and remote care in healthcare systems across the G20. Ultimately, the interventions of such a task force could help G20 member states to build more accessible healthcare systems and improve health outcomes for all.

Coordinate funding for digital health innovations

The digital transformation of health systems is crucial for achieving universal health coverage and improving

health outcomes worldwide. A recent study[33] estimates that LMICs will need an investment of US$12.5 billion over the next five years to support this transformation. The estimate is based on a medium cost scenario, with the low case sitting at only US$7.1 billion, highlighting the urgent need for coordinated funding to support digital health initiatives. Fortunately, donors have already endorsed principles of digital investment that align with country specific digital health strategies and support adoption beyond pilot populations.[34] This presents an opportunity for coordinated funding efforts that optimise resource allocation and facilitate collaboration between stakeholders.

To further strengthen the coordination of funding for digital health innovations, the G20 could explore the establishment of a fund to support startups working on digital health solutions with potential global impacts. The fund, housed within an international body such as the WHO, could also support innovations that address the digital gender gap and promote access to e-health services and opportunities, especially among marginalised communities. Considering the impact sector and geographical focus, the suggested capital pool of funds would be approximately US$ 150 million. In addition to establishing this digital health innovation fund, the G20 could leverage existing multilateral financing mechanisms such as the World Bank's Digital Development Partnership (DDP)[35] to channel funding towards digital health innovations.[c] By working with the DDP, the G20 can ensure that funding for digital innovations is aligned with broader developmental goals and priorities, and can benefit LMICs that may face challenges in accessing finance for digital health initiatives.

Attribution: Anirban Sarma and Varun Kaul, "Promoting Digital Health: Envisioning Strategic Partnerships within the G20," *T20 Policy Brief*, June 2023.

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c   The DDP aims to catalyse investments in digital infrastructure, services, and platforms, and can provide technical assistance and advisory services to governments and other stakeholders.

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