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## CLOSING THE DIGITAL DIVIDE:

# MORE AND BETTER FUNDING FOR THE DIGITAL TRANSFORMATION OF HEALTH

## Executive Summary

The world's health systems are changing rapidly, driven by the introduction of digital technologies, artificial intelligence and the use of large data sets. The digital transformation has the potential to expand access to health care and accelerate progress towards the Sustainable Development Goal target of reaching universal health coverage by 2030.

We have reached a stage in the digital health journey where we need to think beyond enhancing health systems through the introduction of individual digital technologies and to instead consider the digital transformation of health systems in its broader sense. We need to remove the underlying obstacles and challenges to sustainability and scale. We need to focus on the actions and the investments that are necessary to drive a more equitable, inclusive and sustainable transformation of health systems in low- and lower-middle-income countries.

The past 20 years have seen renewed focus on health governance and have led to a deeper appreciation of the impact of good governance, in its broadest sense (to include legislation, regulation and funding, as well as political leadership, oversight and accountability) on health care delivery across all tiers of the health system. An inclusive governance

structure and processes that are transparent, ensure the meaningful engagement of diverse stakeholders and include strong accountability mechanisms will shepherd a digital transformation that responds to the concerns, expectations and perspectives of a broad spectrum of stakeholders. This encompasses civil society, patient groups, health professionals, academia, young people, women and other traditionally marginalised communities, as well as the private sector, under the convening and leading role of governments. This would also help safeguard against unwarranted or unanticipated exclusions or negative consequences of that digital transformation. This means involving people in the design and the oversight of the digital transformation, understanding their needs and responding to their concerns about existing or potential violations of privacy and human rights.

Countries must develop costed strategies to guide the digital transformation of their health system and governments must be in the driver's seat of this complex, fast-moving and challenging process, with other stakeholders aligning with and supporting their plans. This also includes promoting and expanding digital connectivity and digital literacy across societies; for health workers across all cadres,

including community health workers; and also, for patients, policy-makers and all people who will interact with a digitalised health system.

Little information exists about the financial resource requirements or how funding should be invested and in what sequence to achieve a successful digital transformation of health systems. In this Conceptual Framework, we have identified and costed nine priority digital health investment areas, selected on the basis of input from more than 350 global stakeholders. We have also identified other areas that will require greater investment to ensure that the enabling environment will facilitate the digital transformation in an equitable, inclusive and sustainable manner.

By modelling the estimated cost of these nine investment priorities in low- and lower-middle-income countries<sup>1</sup>, we have come up with an indicative figure for resource needs for a digital transformation of health systems in those countries, including five-year cost projections for each area.<sup>2</sup> Based on this modelling, we estimate that an investment of US\$ 12.5 billion is needed for the nine priority investment areas in 78 low- and lower-middle-income countries over the next five years, or approximately US\$ 2.5 billion per year on average.

Health infrastructure accounts for approximately 75% of the total projected investment. But this only includes health sector costs (health record digitisation, wide and local area networks within facilities and information and communication technology equipment needed at facilities) and not the general investment required to increase digital connectivity or usage among the population, which must also be prioritised. Operational costs, which include ongoing expenses for maintenance, equipment replacement, refresher training, software licensing, project management and help-desk support and make

up half of the total projected costs, are often not fully accounted for in current costing analyses and are absent from most data sources. They are included in this investment estimate.

The total projected cost represents approximately 1% of the annual government health spending of the group of low- and lower-middle-income countries. It is not unreasonable to assume that, on average, 60–70%<sup>3</sup> of this amount can be met from national resources, with the remainder to be externally supported. While countries must take the lead in funding their health system, in many resource-constrained contexts, donor agencies, philanthropic organisations and the private sector are also critical. The relatively modest scale of the needed funding should encourage more donor to reassess the potential of catalytic investments in the opportunities presented. To ensure that the digital transformation of health systems is funded and supported in the most effective manner, coordination and alignment of international investments are necessary.

The digitalisation of all aspects of life, including health, will progress relentlessly. But this progress must be led and guided by a clear and inclusive process if it is to lead to better health, greater inclusion, reduction of inequalities and closing the growing digital divide. Even modest additional investments during this period, if well directed, have the potential to build stronger and more resilient health systems.

This Conceptual Framework outlines the amount, focus and nature of the investments needed to support the equitable, inclusive and sustainable digital transformation of health systems in low- and lower-middle-income countries and offers recommendations for how that transformation should occur.



**Recommendation 1 – More investment from domestic and international sources.** Governments and international donors should prioritise funding to support low- and lower-middle-income countries in digitally transforming their health system ensuring it is equitable, inclusive, sustainable and protective of people’s interests, their right to health, their privacy and their capacity to participate in its governance. Although we have projected an average funding need of US\$ 2.5 billion per year for the next five years for nine priority digital health investments areas for these countries, the true investment requirement will ultimately be determined country by country and based on costed plans. It will need to be complemented by wider investment to increase digital connectivity and usage among the population as well as investments to address the greater enabling environment.



**Recommendation 2 – Better coordinated and aligned investments.** International donors and the private sector should ensure that their investments are coordinated and aligned with national priorities. This should include identifying and strengthening systems and processes that improve the coordination of funding. Without it, there is a risk of fragmentation, duplication and waste. At national level, there is a need for coordination among stakeholders and international donors through transparent processes and under the leadership of the government. The widely endorsed Principles for Donor Alignment for Digital Health provide the blueprint for this coordinated action and should be fully adhered to and monitored.

To enhance transparency and accountability, there is also a need for multilateral development institutions to introduce tools at national scale that track and publish data on funding for digital health as part of their wider health investment. In addition, WHO should fulfil the wide-ranging strategic, normative and technical role envisioned for the organisation at the World Health Assembly meeting in 2018. In this capacity, WHO must monitor the needs and flow of funds for the digital health transformation.



**Recommendation 3 – A costed digital health strategy and investment road map.** Countries must each develop an inclusive digital health strategy as an integral component of their universal health coverage and health system-strengthening agenda. The strategies must be aligned with the country's digital health maturity levels, and they must promote interoperable solutions for connectivity, capital investment, data governance, legislation and regulation, literacy and workforce. These solutions need to be developed in an inclusive and participatory manner, with sufficient time for consultation with different stakeholders, including civil society, youth, women and marginalised and hard-to-reach communities, as well as health workers at all levels of the health system. These strategies need to be costed and accompanied by a prioritised and sequenced investment road map that lays out the different sources of funding as well as the gaps.



**Recommendation 4 – A robust regulatory framework and policy environment.** National governments must prioritise establishing a regulatory framework and the necessary policies to guide the digital transformation of their health system so that it is inclusive, equitable and sustainable. This process must be based on multistakeholder engagement and include the broad participation of civil society, including youth, women, older people, people living with disabilities and marginalised and hard-to-reach communities. This needs to lay the legal foundations in terms of health data use, privacy, digital literacy and the policies for what kind of digitalised health system a country needs to ensure universal health coverage. A transparent public policy environment increases planning and investment certainty for international donors and the private sector and clarifies the incentives and expectations.



**Recommendation 5 – Mechanisms for meaningful multistakeholder engagement.** For a digital transformation to be effective in improving health outcomes and accelerating progress towards universal health coverage, civil society, including young people, women, older persons, persons with disabilities and marginalised and hard-to-reach communities, needs to be involved at all levels of planning, strategy, execution and monitoring of the transformation. Such participation needs to be supported financially to ensure that communities across all strata of society are represented and can hold decision-makers and service providers accountable.



**Recommendation 6 – Improved digital connectivity.** There is urgent need for all stakeholders – national, international, public and private – to prioritise strategic, targeted and coordinated actions to close the divide in digital access. This is a prerequisite for equitable access to technology-enabled health services. This means confronting coverage gaps, affordability and digital literacy. It requires political will at all levels and civil society engagement to mobilise policymakers and to generate public awareness. If ignored, the divide in connectivity will widen the health equity gap and further marginalise already disadvantaged populations.