



CLOSING THE DIGITAL DIVIDE: MORE AND BETTER FUNDING FOR THE DIGITAL TRANSFORMATION OF HEALTH IN LATIN AMERICA AND THE CARIBBEAN

Key regional facts and figures:

- **6** - Countries with a national digital health strategy¹
- **200 million** - People without access to basic digital infrastructure
- **23% vs 67%** - Digital divide in internet access between rural and urban areas
- **4%** - Public expenditure on health as a % of GDP (regional target is 6%)²
- **28%** - Level of out-of-pocket expenditure on health
- **Unknown** - National/regional spending on digital health

Investing in digital health transformation in Latin America and the Caribbean

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 or solutions and instead consider the overall digital transformation of health systems.

Based on Transform Health's report, *Closing the digital divide: More and better funding for the digital transformation of health*,³ this brief explores the situation in Latin America and the Caribbean (LAC), with recommendations to guide investments and action in the region towards health for all in the digital age.

¹ Governing Health Futures 2030. [Compilation of national digital health policies and strategies](#). Accessed 28 November 2022.

² ITU. [Measuring Digital Development: Facts and Figures 2021, 2022](#). (Data for ITU Asia-Pacific region)

³ Transform Health. [Closing the digital divide: More and better funding for the digital transformation of health](#). Basel: Transform Health; 2022.

The status of digital transformation of health in Latin America and the Caribbean

For many LAC countries, digital transformation of health has only recently begun to feature prominently on government agendas. The COVID-19 pandemic has significantly advanced awareness of digital health and recognition of its importance as an investment, rather than a cost, to society. However, countries in the region continue to face a proliferation of uncoordinated digital health projects that operate outside of national strategies, legislation and regulatory frameworks. Fragmentation, weak data management and the absence of comprehensive, fully costed and multi-sectoral digital health strategies has resulted in unnecessary duplication of expenditures and data silos that hinder their systemic use. This has also made it difficult for donors to align their investments with national priorities and support the scale-up of effective digital health solutions.

To overcome these challenges, most LAC countries have now developed a national strategy for digital health and have introduced rules to improve interoperability. Argentina, Brazil, Chile, Costa Rica, Mexico and Uruguay have led the way in developing digital health strategies and other governance instruments. Mexico, for example, took a leap forward in the formulation of public policies on digital health thanks to the creation of the National Digital Strategy Office of the Presidency of the Republic, as did Costa Rica with its National Digital Transformation Code.⁴

The further expansion of digital health transformation is limited by gaps in fundamental infrastructure, particularly outside of urban

areas. Approximately 200 million people lack access to basic digital infrastructure in LAC and while others have access, the service is of poor quality and/or very expensive. The digital divide between rural and urban areas in the region remains significant, with 67% of households in urban areas having internet access, compared to only 23% of households in rural areas.⁵ The poor quality and high cost of connection remains a barrier in many countries, making it difficult for communities to access relevant e-Health services.⁶

Overview of digital health funding in the region

The health sector in Latin America and the Caribbean has historically been marked by low public spending, political instability and weak monitoring, evaluation and transparency processes for domestic and external investments in health. Inflation and income inequality are endemic problems throughout the region, impacting the availability of public resources to invest in health as well as reducing household incomes.

Although levels of healthcare spending vary considerably among LAC countries, on average the proportion of domestic budgets invested in health has increased over the past two decades. According to the World Bank, LAC countries spend an average of 7.96% of GDP on health which equates to an average of US\$ 1,285 per capita.⁷

However, the proportion of public spending on health has fallen since 2015 and few countries have met the PAHO target of investing 6% of GDP on public expenditures in health as part of the region's UHC strategy (the current average is 4%). For the region as a whole, 51% of health spending comes from general government

⁴ [Estrategia de Transformación Digital hacia la Costa Rica del Bicentenario 4.0 2018-2022](#)

⁵ Comisión Económica para América Latina y el Caribe (CEPAL), [Datos y hechos sobre la transformación digital](#), Documentos de proyectos, Santiago, CEPAL, 2021.

⁶ ITU. [Estudio sobre TIC y salud pública en América Latina: la perspectiva de e-salud y m-salud](#). 2018

⁷ [World Bank database](#). Accessed 25 November 2022

expenditure. The remaining 49% comes from private spending, including 28% out-of-pocket payments.

Information about the amount that LAC countries are investing in digital health is not publicly available. Digital health is not highlighted within national health budgets and expenditure on digital health is not routinely reported. Key informant interviews with digital health experts in Ecuador and Honduras suggest that between 1-5% of health investments are for digital health, excluding the costs of developing health information systems. Self-reported data on Peru collated for the Global Digital Health Index indicates that less than 1% of public health spending is for digital health. In the same Index, Chile states that such information is currently unavailable.⁸

Despite the economic impacts of the pandemic, it is estimated that overall investments in digital health will continue to grow at a faster rate than overall national health budgets.⁹ For example, between 2019 and 2020, venture capital investment in health tech startups in LAC increased five times from US\$ 16 million to US\$ 99 million¹⁰. This investment is categorised into five main verticals: medical devices, health plans and insurance, mental health, online pharmacies and telemedicine.

Priority investment areas in LAC

To allow the LAC region to take effective and sustainable steps on the road to digital health transformation three investment areas must be prioritised:

1. Infrastructure – Building a strong digital health infrastructure is an essential foundation for future investments and more effective and equitable digital transformation of health systems.

2. Health workforce training – The ongoing training of healthcare personnel in digital issues is also an important area for investment. The development of curricula must be given top priority to prepare health professionals to adopt and promote digital solutions, ensuring compliance with standards that protect the personal information and sensitive data of patients.

3. Public digital health literacy – Increasing the digital health literacy and skills of populations, particularly underserved communities, is necessary for them to effectively use digital health applications and services.

To maximise the impact of these investments, adequate priority and resources must also be directed towards a stronger enabling environment for equitable digital transformation of health systems (see recommendations below).

⁸ [Global Digital Health Index](#). Accessed 16 November 2022.

⁹ Corporación Andina de Fomento (CAF), Comisión Económica para América Latina y el Caribe (CEPAL), [Las oportunidades de la digitalización en América Latina frente al Covid-19 Documentos de proyectos](#), CAF y CEPAL, 2020.

¹⁰ Startupeable. [Healthtech en Latinoamérica: Guía Definitiva](#), 10 June 2021.

Cost estimates

Health planners in LAC currently lack reliable information on the short and long term costs of digitally transforming their health systems. Reliable data on investments in digital health in the LAC region are not publicly available. Models that estimate the cost of digital solutions are often based on short-term programmes or extrapolated from pilot and research environments, which may not accurately represent real-world data or be replicable to different contexts in the region. This lack of solid evidence on digital health investment issues also deters investors or donors from intervening in the region.

Closing the digital divide estimates that US\$ 12.5 billion is needed to support the digital transformation of health systems in low- and lower-middle-income countries over the next five years. This figure is based on a medium cost scenario for nine priority investment areas. This translates to an annual investment of at least **US\$ 0.60 per person per year**. While approximately 60–70%¹⁰ of this funding need should be able to be covered by domestic sources, the remaining gap would ideally be covered by multilateral donors and development banks, existing global funding mechanisms, private foundations and bilateral donors.

The true investment requirements will ultimately need to be determined country by country and based on costed digital health strategies and investment roadmaps. Investments in digital transformation of health systems will also need to be complemented by wider investment to increase digital connectivity and usage among the population, as well as investments to address the broader enabling environment.

Closing the funding gap

The effective use of digital technologies and data can enable health provision in LAC to be more nimble, responsive to population needs, equitable and effective in all aspects of the care continuum. This can deliver healthier populations, cost efficiencies and enhanced economic growth. Whilst the immediate benefits of investing in digital health may be difficult to quantify, policymakers must recognise that financing the digital transformation of health systems is a critical, long term investment rather than a cost to society. Investing in digital transformation now will help LAC countries to accelerate UHC and support achievement of the SDG targets by 2030.

Sustainable investments in the region will only be achieved when different actors know, based on efficient data, the true costs of digital transformation. This includes raising awareness about the importance of essential recurrent costs such as human resource training and technical support. The development of cost-benefit and timely impact evaluations of digital health initiatives will help to strengthen evidence-based policy making and investments.

¹⁰ This is an illustrative estimate based on the proportion of domestic spending to international aid spending in low- and lower-middle income countries health spending from WHO Global Health Expenditure database, and domestic investment proportions from the Global Fund 7th Replenishment projection of available resources.

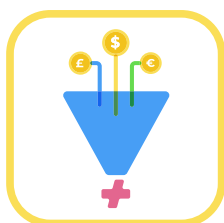
Recommendations for Latin American and Caribbean governments and digital health donors

Closing the digital divide calls on national governments, donors and development partners, and the private sector to increase and better coordinate investment in the equitable, inclusive and sustainable digital transformation of health systems in low- and lower-middle-income countries. The report sets out six overarching recommendations to increase and improve the impact of investments in the digital transformation of health systems.



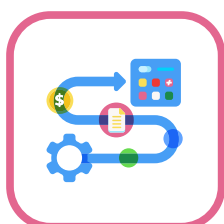
Recommendation 1: Increase investment in digital transformation of health

Governments and international donors should prioritise funding to support low- and lower-middle-income countries in the region to digitally transform their health systems, ensuring investments are sustainable and support equity, inclusion and human rights. Taking full advantage of the digital transformation will particularly require investments in LAC's human resources and digital health infrastructure. To generate adequate fiscal revenues, governments must ensure efficient tax policies, comprehensive public financial management, transparency and good governance. In the short to medium term, efforts will need to be boosted by financing from outside the region, both from NGOs and private entities, with grants and concessional loans to the extent possible and necessary. Alternative sources of domestic financing should also be explored including innovative financing mechanisms.



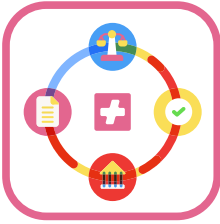
Recommendation 2: Improve coordination and alignment of digital health investments

Donors should ensure that their investments are coordinated and aligned with national priorities. Inter-ministerial working groups and public-private partnerships are among the mechanisms that must be strengthened to reduce the proliferation of fragmented digital health projects, duplication of resources and data silos. National and state-level coordination can also help to better streamline investments, harmonise standards and improve alignment. Greater coordination between LAC countries will create opportunities to replicate digital transformation success stories from the region and learn lessons from other countries' experiences.



Recommendation 3: Develop investment roadmaps

Governments should develop costed strategic plans and investment roadmaps for the digital transformation of health, including building digital health literacy and skills, as an integral component of their UHC and health system strengthening agenda. Sustainable investments in the region will only be achieved when different actors know, based on efficient data, the true costs of digital transformation. This includes raising awareness about the importance of essential recurrent costs such as human resource training and technical support. The development of cost-benefit and timely impact evaluations of digital health initiatives will help to strengthen evidence-based policy making and investments.



Recommendation 4: Strengthen policy and regulatory environments

National governments must strengthen their legislative and regulatory frameworks and develop the necessary policies to guide the inclusive, equitable and sustainable digital transformation of their health system. This process must be inclusive of all relevant stakeholder groups and prioritise issues such as health data governance. 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: Create mechanisms for meaningful multi stakeholder engagement

Involving stakeholders from multiple sectors and backgrounds in the development, implementation and monitoring of digital transformation strategies will help to ensure they reflect the needs of different communities. The participation of groups such as young people, women, older persons, persons with disabilities and marginalised and hard-to-reach communities should be supported financially to ensure that people across all strata of society are represented and can hold decision-makers and service providers accountable.



Recommendation 6: Bridge the digital divide

The impact of digitalisation, even in countries where this is more advanced, will be limited without a focus on equity. Equity must be the fundamental principle around which any digital health strategy or investment roadmap is structured, giving priority to those populations who are furthest from UHC. Governments and donors should prioritise strategic, targeted and coordinated actions to close the divide in digital access, a prerequisite for access to digitally-enabled health.