1 Key findings and recommendations

This chapter provides an overview of the publication *Primary health care for Resilient Health Systems in Latin America,* as well as summarising the main findings. The chapter starts by recalling the socio-economic context of LAC-7 countries which amplified the challenge of the COVID-19 pandemic. The second section shows that the performance of primary health care is still insufficient across LAC-7 countries with regards to primary, secondary, and tertiary prevention. The third section focuses on the role played by primary health care to blunt the impact of COVID-19 on health in LAC-7 countries, while showing that access to routine care was fundamentally impacted. The last section identifies policy levers to improve preparedness and resilience during health crises through stronger primary health care, notably by enhancing comprehensiveness of care, workforce investment and planning, and stronger health information infrastructure.

Key findings and recommendations for improving primary health care in LAC-7 countries

- The two regions with the highest death toll caused by the COVID-19 pandemic were Europe and Latin America and the Caribbean. Europe accounted for 37% of all confirmed cases and 30% of COVID-19 deaths worldwide, while LAC had 12% of confirmed cases, but 26% of confirmed deaths by the end of October 2022. Figures of excess mortality for some LAC countries suggest that the actual impact of the pandemic in the region was even larger and more deaths can be attributed to COVID-19. For example, excess mortality in Peru and Mexico in 2020-21 compared to the average of 2015-19 were 3.8 and 2.3 times higher than the OECD average, respectively.
- In LAC, the pandemic brought additional stress to health systems that already experienced important structural challenges, including a growing burden of chronic diseases, population ageing, high levels of social health inequalities, under-investment and strong budgetary restrictions, and systemic inefficiencies. Within this context, doubling down on primary health care will be a cost-effective strategy to strengthening health systems, both to increase preparedness to future pandemics and to address the structural challenges in the region.
- Primary health care (PHC) is the backbone of high-performing health systems. Seven Latin American countries, Argentina, Brazil, Chile, Colombia, Costa Rica, Peru and Mexico (LAC-7) have made great efforts strengthening their primary health care systems to improve the health and health care of their people over the past decades. Some important progresses can be attributed to the expansion of PHC in the region. Life expectancy at birth continues to rise in LAC-7 countries, reaching 78.5 years on average in 2019 (a gain of 3 years since 2000 compared to 3.6 years across other OECD countries). Infant mortality has also been halved over the past two decades, going from 21 deaths per 1 000 live births in 2000 to 10.8 deaths per 1 000 live births in 2020.
- Despite these efforts, health system performance still lags behind other OECD countries, and beyond the aftermath of COVID-19, severe structural gaps in development levels face LAC-7 countries. Population ageing is happening in all LAC-7 countries: in 2020, the population older than 65 years represented 10% on average. By 2080, this figure is expected to increase three-fold to reach 30%. The ageing of the population has already important impact on the health of the population. Chronic non-communicable diseases are now the most common causes of death, being responsible for over 80% of all deaths across LAC-7 countries. Cardiovascular diseases and cancers are the most prevalent non-communicable diseases in LAC-7 countries, accounting for 46% of all deaths in 2019. In addition, several risk factors for health raise some concerns in LAC-7 countries as they will go hand in hand with an increased prevalence of chronic non-communicable diseases. The share of the population being obese or overweight in all LAC-7 countries has increased by almost 20% between 2000 and 2020. The prevalence of overweight and obesity is now larger than across other OECD countries.
- In many aspects, PHC has contributed to the COVID-19 emergency response in LAC-7 countries by carrying out some public health activities (such as creating awareness on COVID-19 risks and prevention of infection in Costa Rica, Peru and Argentina; or to proactively identify and engage with high-risk individuals in Argentina, Costa Rica and Mexico), performing some form of COVID-19 testing (Costa Rica), using existing primary health care facilities to meet COVID-19 health needs (Costa Rica, Chile and Brazil), making quick and effective referral to hospital (Mexico) or using telehealth services (Colombia and Brazil).

- However, the COVID-19 pandemic has revealed that many LAC-7 health systems faced challenges in maintaining routine care. Disruptions in primary, secondary and tertiary prevention in LAC-7 countries show how primary health care systems were not resilient enough during the COVID-19 pandemic. Coverage for DTP3 vaccines amongst children aged one have for example fallen by 8% in 2020 compared to the average between 2015 and 2019 (89%). Largest reductions are found in Argentina, Mexico and Brazil.
- Increasing preparedness and resilience of LAC-7 health systems to face future high impact shocks will be critical not to reverse many of the well-being and health gains achieved during the last two decades.

Improving population health and reducing health inequalities through stronger primary health care will help increase preparedness and resilience

- Making primary health care the front door of the health system to deliver a range of crucial health services, including vaccination, screening, early detection of disease and patient-centred management will improve population health, and reduce social health inequalities. It will help making individuals more resilient against COVID-19 and potential future outbreaks of infectious diseases, reducing both the inequities in outcomes and the demand for acute services during a crisis.
- This will be vital given current gaps in primary health care performance and the marked social health gradients. Vaccination coverage, for example, varies across socio-economic status and residence status: measles and DTP3 vaccination is 16% and 25% higher amongst high income groups than low-income groups in Brazil. In addition, coverage of breast cancer screening in LAC-7 countries is well below the average across other OECD countries: in Peru and Brazil, the coverage rates is more than half the OECD average. Another marker of lower primary health care quality is antibiotics consumption, which is above the OECD average in Brazil, Costa Rica or Chile.
- PHC systems in LAC-7 countries lack the capacity to carry-out its core functions. The lack of availability of medical technology is for example a major problem limiting early detection of diseases and contributing to late diagnosis in some LAC-7 countries. Colombia and Chile have respectively 12 and 32 units per million females aged 50-69, well below the LAC-7 average of 76 units and the OECD average of 181 units. In addition, limited training in guidelines and care standards, and a lack of accountability system, also adversely impact the effective implementation of early detection programmes.
- Investing in the right equipment, accountability mechanisms, guidelines and trainings will be key tools to improve the capacity of primary health care systems to deliver its key functions prior a pandemic occurs, but also during a health emergency.

Greater workforce investment and planning is needed in primary health care to face existing shortages

- There are also workforce shortages in LAC-7 countries. The average density of physicians improved from around 1.3 to 2.7 per 1 000 inhabitants between 2000 and 2020 across the LAC-7 countries, though it remained below the OECD average of 3.6 per 1 000 inhabitants in 2020. The density of general medical practitioners averaged at around 0.8 per 1 000 inhabitants in 2020 across the LAC-7 countries, suggesting a modest improvement from 0.5 per 1 000 inhabitants in 2010. However, the average density of general medical practitioners across the LAC-7 countries in 2020 also lagged the OECD average of 1.2 per 1 000 inhabitants in the same year. In this period, Colombia and Chile experienced the greatest increases in the number of general medical practitioners among the LAC-7 countries. Further, the average density of nurses and midwives across the LAC-7 countries consistently lagged the OECD average over the last two decades.

- The OECD analysis suggests that, in 2020, the shortages of physicians, nurses, and midwives are estimated to average at around 1.11 per 1 000 inhabitants across LAC-7 countries. Without robust policy action, the gaps between the demand for and supply of physicians, nurses and midwives are projected to persist in all LAC-7 countries by 2030, with the estimated shortages for these health workers averaging at around 1.03 per 1 000 inhabitants across all LAC-7 countries by 2030.
- LAC-7 countries need to strengthen efforts to examine human resources health needs by supporting local communities which may lack the technical capacity and financial resources to assess their own needs. Greater collaboration and co-ordination between various stakeholders across multiple sectors is needed, for example between the Ministries of Education and Health. There is also a need to improve methodologies that examine factors determining the demand for health workers, by considering epidemiological or economic factors.
- Expanding the role of existing health professionals, including nurses and community health workers, is a key option to cope with health workforce shortage in LAC-7 countries. This will require implementing education and training programmes to support the development of new tasks for new roles.

Investing in stronger health information infrastructures is a must to carry-out health monitoring and disease surveillance, and to assess health workforce needs

- Investing in a consolidated EHR at national level will help better engage in health monitoring and disease surveillance. This is critical to provide a good understanding of the health status and health needs of the population, and to perform epidemiological surveillance during a public health crisis.
- In Costa Rica, the registration of COVID-19 cases was carried out through the unique Digital Health Record (EDUS), which links the health centres network of the Caja Costarricense del Seguro Social (CCSS). All COVID-19 laboratory results, regardless of the place or technique with which they are processed, are available in real time. By contrast, in Mexico, the fragmented public health sector had 65 different electronic health record (EHR) systems which varies in content, information sources, and human resource capacity to manage them, limiting health monitoring and management of health crisis.
- Strengthening health workforce data infrastructure and information systems will also be key to improve the coverage and quality of available data. This will help to benchmark needs for human resources for health over time, geographic areas, and type of providers, to guide decision making. In many LAC-7 countries, administrative data on health workers suffer from inconsistencies in the definition of key indicators, prolonged delays in data entry and updates, lack of comparable data over time and across geographic locations. Further, data on the availability of primary health care teams over time is not publicly accessible in most LAC-7 countries except in Brazil, Peru and Costa Rica.

Under-resourced and fragmented health care systems amplified the challenge of COVID-19 in LAC-7 countries

LAC-7 countries received the COVID-19 pandemic with a pending agenda of socio-economic and health system challenges

Six out of seven LAC-7 countries are ranked as upper-middle income countries in the UNDP's Human Development Index, except Chile, which is classified as a high-income country. Gross domestic product in all LAC-7 countries grew between 2000 and 2020, allowing to make steady social and economic progress. However, GDP per capita was estimated to be USD PPP 18 575 in 2020 (using current prices) on average across LAC-7 countries, more than half the average across OECD countries (at USD PPP 44 416). There are large disparities across the LAC-7 region, with Peru having the lowest GDP per capita at USD PPP 12 577 and Chile having the highest at USD PPP 24 588. Economic growth has allowed the LAC-7 region to significantly reduce the poverty rates from 42.8% of the population in 2000 to 26.3% in 2020, a much higher reduction than among all LAC countries. This important decrease in poverty rates was led by Chile (from 42.8% to 14.2%), Brazil (from 38.4% to 18.4%), and Costa Rica (27.7% to 19.4%).

Despite significant reduction in poverty rates over the past two decades, large socio-economic inequalities persist in LAC-7 countries. Despite significant reduction from 2000 to 2020, the GINI index of income inequality is consistently higher than 40 points (the threshold of high-income inequality), and above the OECD average of 34 points and the LAC-26 average. The COVID-19 pandemic has deepened the deprivation level of already disadvantaged population, with income inequality projected to have increased by 3% in Argentina, Brazil and Mexico between 2019 and 2020 (OECD, 2021[1]),.

In addition to socio-economic challenges, the more limited resources in LAC-7 countries amplified the challenge of fighting the COVID-19 pandemic. Before the pandemic, LAC-7 countries spent almost three times less on health than other OECD countries: in 2019, average per capital health spending in LAC-7 countries (when adjusted for differences in purchasing power) was estimated to be at USD 1 514, while in the OECD it was estimated to be at USD 4 237. There are 2.2 hospital beds per 1 000 habitants, 50% lower the average of 4.3 hospital beds per 1 000 population across OECD countries. In terms of intensive care bed units, which are crucial for the management of patients with severe respiratory disease, the average of intensive care units (ICU) beds in LAC-7 countries was 9.1 per 100 000 population, lower than the average of 22 OECD countries of 12 ICU beds per 100 000 population.

Despite notable improvements over the last two decades, many LAC-7 countries continue to lag the OECD average in terms of the availability of health workers

Over the last two decades, the density of physicians, general medical practitioners, nurses, and midwives improved significantly in many LAC-7 countries. Between 2000 and 2020, the average density of physicians increased from around 1.3 to 2.7 per 1 000 inhabitants, with Colombia and Chile experiencing the largest expansion in the number of physicians. In this period, all LAC-7 countries saw improvements in the density of general medical practitioners, with Chile and Brazil experiencing the most rapid advancements. Across the LAC-7 countries, Colombia had the highest density of general medical practitioners (1.8 per 1 000 inhabitants) in 2020, and Brazil recorded the lowest density of general medical practitioners (0.1 per 1 000 inhabitants). In most LAC-7 countries, the density of nurses and midwives remained relatively stable from 2000 to 2020, though Peru and Brazil experienced a notable increase in the density of nurses and midwives in this period. Publicly accessible data on the availability of PHC teams remains relatively limited across LAC-7 countries but available data suggests an increase in the number of PHC teams. For instance, the number of PHC teams grew nearly 55 percentage points in Brazil between 2008 and 2019. Despite these improvements, the density of physicians, general practitioners, nurses, and midwives remained below the OECD average in 2020 in most LAC-7 countries. Specifically, all

LAC-7 countries except Argentina lagged the OECD average in terms of the density of physicians, and only in Colombia and Chile, the density of general practitioners was above the OECD average in 2020. Similarly, in 2020, all LAC-7 countries except Chile lagged the OECD average in terms of the density of nurses and midwives.

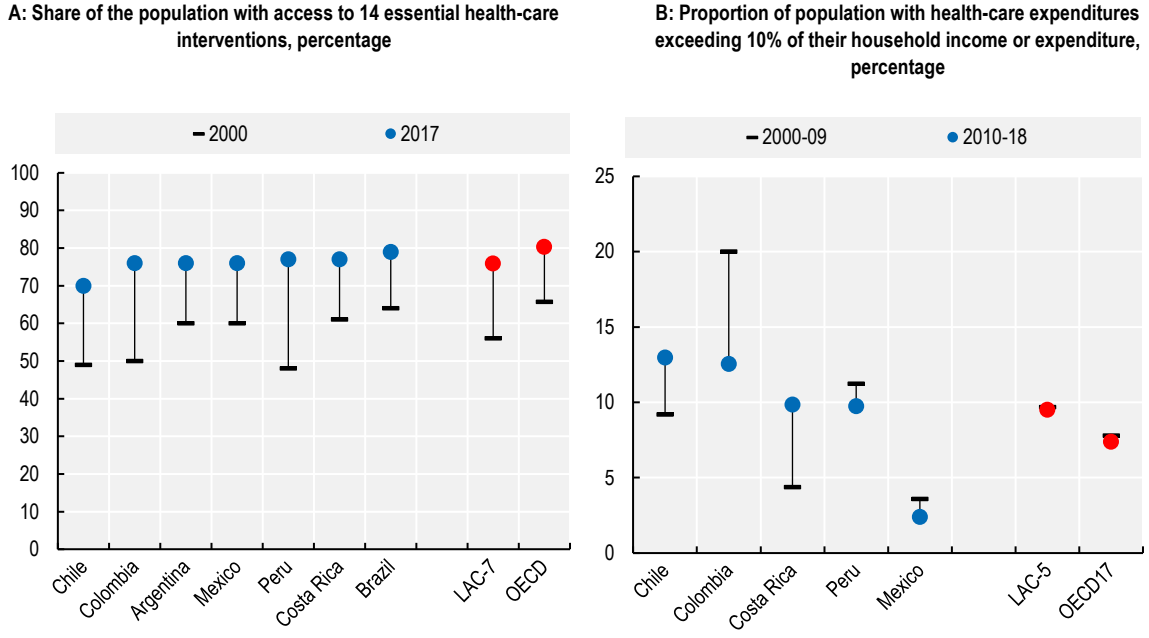
Fragmented health systems lead to coverage gaps and service inequalities in LAC-7 countries

Among LAC-7 countries, Brazil is the only country having a National Health System, with a universal health insurance scheme that covers all health conditions and population groups. Chile, Colombia and Costa Rica follow a Social Health Insurance model, managed by both public and private entities and with differentiated insurance schemes according to contributory status, income, geographic location or other factors. Argentina, Mexico and Peru have a hybrid model, with elements of both National Health Systems and Social Health Insurance systems. The different insurance packages present in LAC-7 countries (except Brazil) are typically based on a national universal minimum package that insurance entities must provide to all the population.

While insurance is managed at the national or subnational level depending on the scope of the insurance entities in place, care delivery systems have, for most countries, decentralised governance into regions or municipalities. Costa Rica and recently Mexico are the exception with a centralised governance structure, where the Ministry of Health is directly accountable for local delivery networks. Delivery networks are composed of both private and public providers. Private health insurance has a strong presence in the region, reaching up to 20% of the population in some LAC-7 countries.

In health systems with various vertically integrated sub-systems, there are no incentives to share information, guidelines or to co-ordinate care horizontally. Fragmentation leads to coverage gaps and service inequalities, as insurers and providers replicate functions in parallel subsystems according to the population contributory status, thus introducing structural inequalities. Moreover, these systems are associated with higher proportions of the population without insurance coverage. International figures measuring people's access to 14 essential health care services suggest important gaps in health care coverage in all LAC-7 countries. While health care coverage has grown between 2000 and 2017, only 76% of the population have access to essential health care services on average across LAC-7 countries (Figure 1.1).

Figure 1.1. There are gaps in health care coverage in LAC-7 countries



Note: Data taken from UN DESA Global SDG Indicator Database. In Panel A, data refer to the service coverage index as measured by the UHC (composite of 14 essential interventions). In Panel B, OECD 17 comprises Canada, Chile, Colombia, Hungary, Ireland, Israel, Italy, Japan, Korea, Lithuania, Mexico, Poland, the Slovak Republic, Slovenia, Türkiye, the United Kingdom, and the United States. In both panels, the LAC averages are unweighted averages.
Source: Adapted from OECD (2021[1]), *How's Life in Latin America?: Measuring Well-being for Policy Making*, https://doi.org/10.1787/2965f4fe-en.

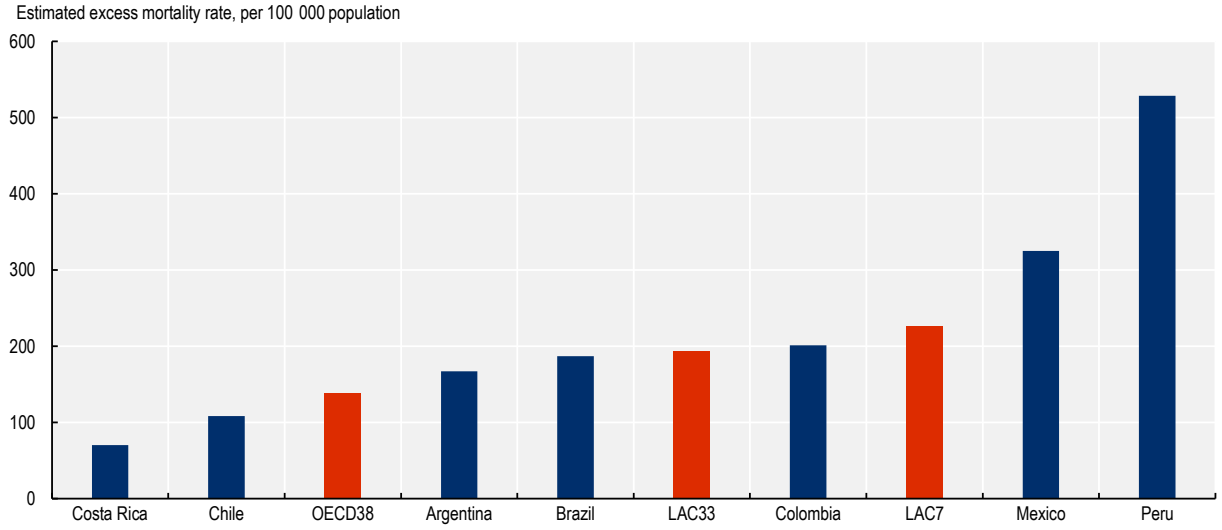
The share of health spending paid out-of-pocket is high in LAC-7 countries

Financial barriers for accessing health services are high in LAC-7 countries. Amongst LAC-7 countries, out-of-pocket spending represents on average 28.1% of total health expenditure, a much higher average than on average across other OECD countries (at 18.1% in 2020). Mexico stands out, with a 42.1% of out-of-pocket expenditure, meaning that patients must finance a significant part of health care good and services themselves. As a result, financial hardship due to health care costs is an issue amongst most LAC-7 countries with available data. On average, 9% of households incurred out-of-pocket health care expenditures exceeding 10% of their income over the 2010-18 period, a share that has remained broadly stable relative to the previous decade. That share has been falling in Colombia but rose by around 3 percentage points or more in Chile and Costa Rica over the same period. In Brazil, 25% of Brazilian households reported that health care costs represented more than a tenth of total household consumption/income and 3.5% reported that it represented a quarter of total consumption/income in 2008. These suggest failure of current arrangements to provide effective coverage in LAC-7 countries.

LAC-7 countries were some of the hit hardest by the COVID-19 pandemic

Latin America and the Caribbean has been one of the most affected regions of the world in terms of COVID-19 mortality (OECD, 2021[2]). When observing estimated rates of excess mortality as an indicator of the direct health impact of the pandemic in the LAC-7 countries, Peru and Mexico stand above the LAC-7, LAC-33[1] and OECD-38 averages, highlighting the high death toll that COVID-19 has had in the region. In Peru, excess mortality were higher than in any other country in the world (at more than 500 additional deaths per 100 000 population). On the other hand, Costa Rica and Chile have been less severely impacted by the pandemic than other OECD countries on average (see Figure 1.2).

Figure 1.2. Estimated excess mortality rates, LAC-7 countries and OECD averages, 2020-21



Source: Wang et al. (2022[3]), "Estimating excess mortality due to the COVID-19 pandemic: a systematic analysis of COVID-19-related mortality", https://doi.org/10.1016/S0140-6736(21)02796-3.

As in other OECD countries, vulnerable population – poorer and more disadvantaged people – have borne a disproportionate burden from the COVID-19 pandemic. In Brazil, Mexico and Colombia, people living in the most deprived areas have for example between 20% and 70% higher risks of dying from COVID-19. In Chile (Santiago), municipalities with low socio-economic status were also hit the hardest in term COVID-19 deaths (Mena et al., 2021[4]). There are many interrelated causes for this social gradient: increased exposure through working and living conditions, inequities in health conditions and risk factors, such as diabetes or obesity, and barriers to access and use of health care. Indeed, as depicted by Figure 1.1 between 30% and 20% of the population did not have access to essential health care interventions in LAC-7 countries (OECD, 2021[1]), *How's*, exacerbating the pandemic's risks.

Despite strong policy efforts in recent decades, performance of primary health care is still insufficient across LAC-7 countries

In the OECD, high performing primary health care systems focus on primary, secondary and tertiary prevention, which increase preparedness and resilience to health crisis

When primary health care services are the primary source of care to addresses the majority of patient needs, have appropriate information to assess a patient's medical history, and are able to co-ordinate care effectively with other health services, they are well positioned to carry-out three core functions. These functions are:

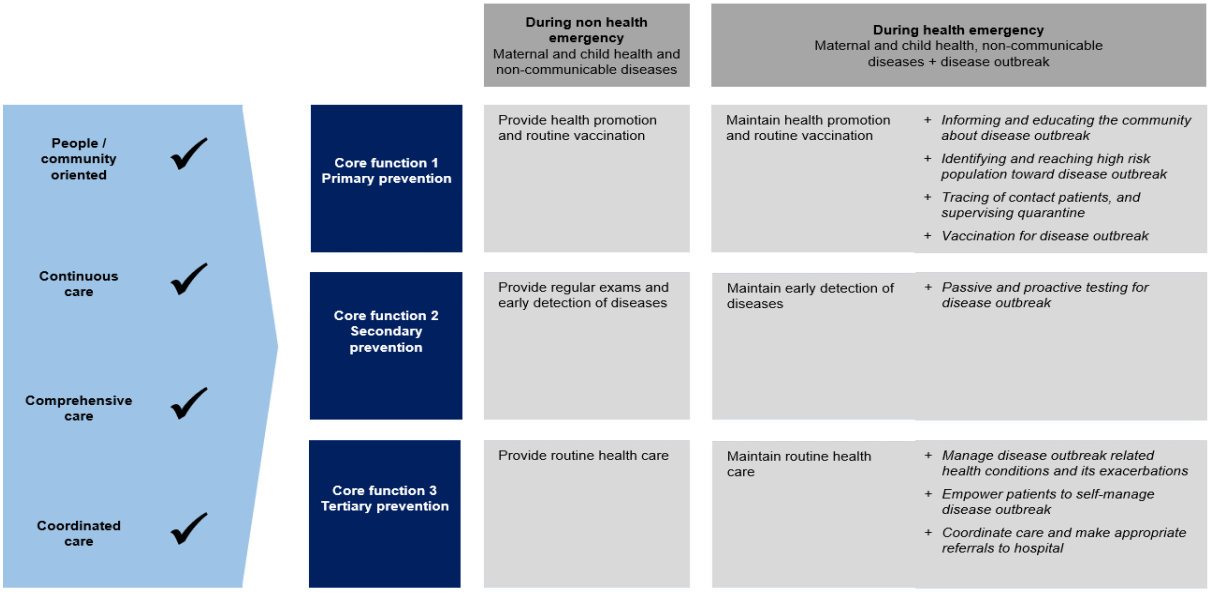
1. primary prevention, especially providing health promotion and vaccination;
2. secondary prevention, including providing regular exams and screening to identify diseases; and
3. tertiary prevention, delivering routine care for underlying health conditions.

These three core functions are critical to primary health care preparedness and resilience during crises, including health emergencies. Evidence confirms that most burdens related to health emergencies fall within the mandate of primary health care roles and functions (Burn et al., 2020[5]; Matenge et al., 2021[6]). This was the case in Australia and New Zealand, where general practices undertook a range of critical

roles in providing responsive health care during several disasters that took place between 2009 and 2016. These roles included providing primary health care in alternative health care facilities, adapting existing health facilities for the purposes of providing disaster health care, and maintaining care continuity for management of chronic diseases.

As such, strong primary health care is key to health systems absorbing and recovering from shocks. Indeed, there are many key linkages between core primary health care functions and the ability of countries to respond effectively to the COVID-19 pandemic or any other health emergencies (Figure 1.3). For example, primary health care has played an important part in COVID-19 vaccination roll outs, informing patients and the community about COVID-19, contributing to early detection of COVID-19 and using outreach services to manage mild COVID-19 in community and primary care settings. Primary health care systems have also helped manage the burden of COVID-19, in co-operation with hospitals, to bring efficiency gains in containing viral spread and managing patients, while helping to avoid overcrowded hospitals.

Figure 1.3. Framework linking key primary health care functions ordinarily and during a health emergency



Strong PHC which focuses on these three core functions improves the overall health of the population prior to health emergency, which enhances preparedness to deal with emerging pathogens or health shocks such as the COVID-19 pandemic. Embedding these three core functions into PHC also increases the resilience of health systems, by responding to both diseases outbreak and non-disease outbreak needs during a crises.

The importance of strengthening primary health care is highlighted in the Action plan on health and resilience in the Americas, adopted by the heads of State and Government on 9 June 2022 (Six Summit of the Americas, 2022[7]). One key objective of the Action Plan includes, among others, strengthening the resilience of health systems by expanding access to comprehensive people and community centred health services and access to primary health care.

Before the COVID-19 pandemic, primary health care systems in LAC-7 countries struggled to deliver its three core functions

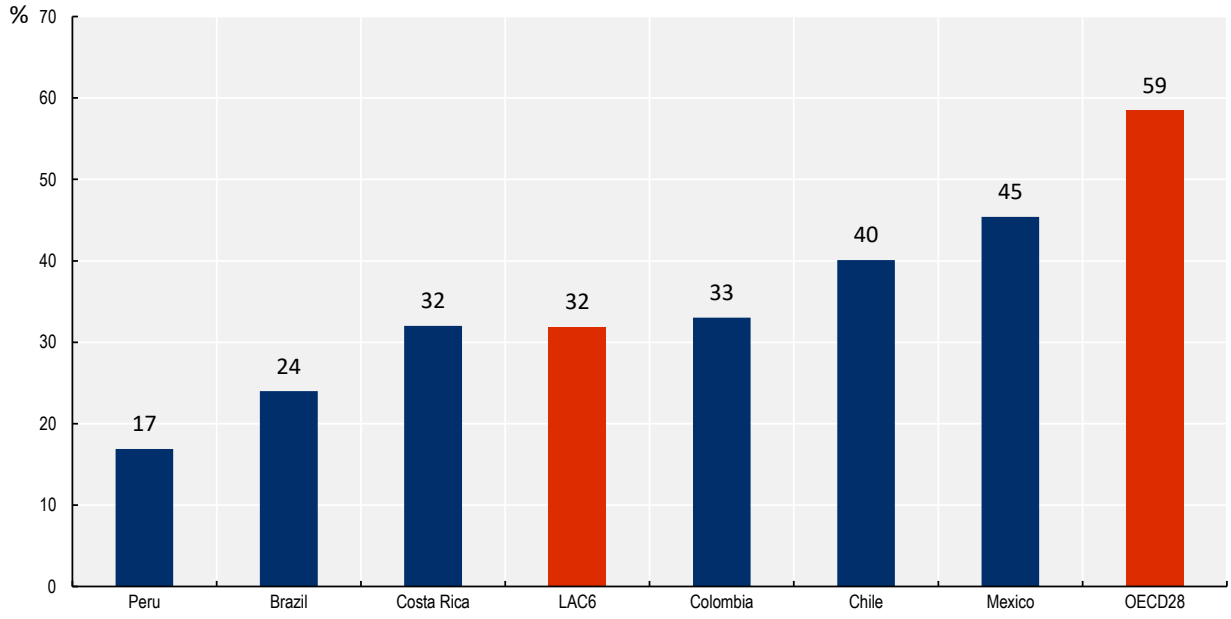
A number of worrying indicators suggest an urgent need to strengthen key functions of primary health care in LAC-7 countries, as measured by primary, secondary, and tertiary prevention.

On primary prevention, and despite increasing risk factors to health, there is scope to strengthen health promotion and prevention into primary health care. Available evidence suggests low levels of engagement from primary care physicians with patients' lifestyles in some LAC-7 countries (Guanais et al., 2018[8]). Counselling on healthy lifestyle is rarely implemented in the delivery of PHC services in Brazil, Colombia and Mexico. Only 24.3% of respondents in Brazil, 23.6% in Colombia, and 40.9% in Mexico indicated that the primary care physician discussed issues related to healthy lifestyles, such as diet, physical activity, and stress factors. On immunisation programme, while LAC-7 countries have well established and effective vaccination programmes which allow to achieve higher coverage rates than across other OECD countries, there are marked socio-economic inequalities. International figures show that Costa Rica and Chile reached higher vaccination rates than the OECD average for DTP3 and measles for children aged one (around 95%). Similarly, Colombia has been able to achieve a high coverage of immunisation against measles and a DTP3 vaccination rate that is close to the OECD average. However, Mexico is yet to achieve a high vaccination rate against measles (at 73% in 2019), while the same is true for Brazil on DTP3 immunisation coverage (at 70% in 2019). In Brazil, Colombia and Peru, vaccination coverage for measles and DTP3 is consistently higher amongst people with higher income. In Brazil, vaccination coverage rates for Measles and DTP3, respectively, is 16% and 25% higher amongst high income groups than low-income groups.

On secondary prevention, more could be done to improve depth and scope of screening strategies. The range of diseases included in early detection programmes varies across LAC-7 countries, but cancers (breast, cervical, colorectal), diabetes, hypertension, and antenatal and childcare are common. Even though programmes for early detection are comprehensive and aligned with WHO recommendations, implementation challenges result in suboptimal coverage rates in the region. Breast cancer screening in most LAC-7 countries has not reached the levels set out in the countries' screening programmes. However, important improvements have been made in the last decade (OECD, 2021[9]; PAHO/WHO, 2015[10]). In 2019, coverage rates for breast cancer range from 24% of all females aged 50 to 69 years old in Brazil to 45% in Mexico, well below the average across other OECD countries at 59% (Figure 1.4). The same is true for cervical cancer screening coverage rates which reach on average 42% of females aged 20-69 years in the LAC-7 countries, below the 58% average seen for OECD countries. There are also clear shortcomings when it comes to screening for diabetes and hypertension in some of the LAC-7 countries. Reported coverage rates for hypertension and diabetes screening range between 13% in Mexico to 84.3% and 71.1% in Argentina, respectively. This is relatively low given the increasing risk factors to health and the rising burden of chronic conditions in these countries.

Figure 1.4. Breast cancer screening coverage, 2019

Percentage females aged 50-69, screened on previous 2 years



Note: Data for Colombia is from 2017. Peru is calculated over females aged 40 to 59-year-old.
Source: Costa Rica and Brazil from OECD (2021[9]), *Primary Health Care in Brazil,* https://doi.org/10.1787/120e170e-en; Mexico, Chile, OECD from OECD.stat; Colombia from INC (2019[11]), Boletin de Servicios Oncologicos; Peru from Hernández-Vásquez and Chacón-Torrico (2019[12]), "Use of mammography in Peruvian women: An analysis of the 2018 Demographic and Health Survey", https://doi.org/10.5867/medwave.2019.09.7701.

With regards to tertiary prevention, inappropriate management of chronic diseases is highlighted by available data on hospitalisation for chronic conditions, a key performance indicator to measure quality of chronic disease management at primary health care level. PHC treatment for diabetes patients appears to be particularly underperforming in Mexico and Costa Rica. High hospitalisation rates for chronic conditions show that recommended care is not always provided for people with these conditions. Cancer care is another field in which LAC-7 countries are underperforming compared to other OECD countries. Colon cancer survival rates are systematically lower in LAC-7 countries (regional average of 50%) than across other OECD countries (average of 61%). On a more positive note, LAC-7 countries have already proven their ability to leverage PHC potential to improve care for conditions such as HIV/AIDS. Although still far from UNAIDS targets, Brazil, Chile and Peru have high antiretroviral treatment coverage rates, with PHC playing a key role in ensuring patients attend follow-up sessions, are well advised to self-manage the disease and are given timely referrals to specialised care when needed. Such positive experience could guide LAC-7 countries to make sure PHC is equipped with the right tools, training and incentives to appropriately manage chronic non-communicable diseases in primary and community care settings.

Opportunities to provide proactive care are often being lost because primary health care do not act as the first point of care in most LAC-7 countries

Aiming at universal health, policies have been implemented to improve access to care, coverage, fair financing and quality. Some LAC-7 countries have implemented policies to strengthen primary health care and place it at the centre of their health care strategy (such as Brazil, Chile and Costa Rica), but there is significant variation in the effective implementation of these policies between and within countries. While in most other OECD health systems primary health care covers the entire population, the quality, range of services, and coverage of PHC in LAC-7 countries still has room for improvement.

Primary health care is governed by Municipalities in all decentralised countries, except for Colombia where it is managed at national level by the Ministry of Health. In countries with centralised governance (Costa Rica, and Mexico), primary health care networks respond directly to the Ministry of Health. Primary health care delivery is typically organised in multidisciplinary teams working in primary care centres, walk-in, low complexity and rural clinics and are generally public. LAC-7 countries uses a variety of payment systems to finance PHC. Most systems combine either capitation or global budget with fee-for-service. Additionally, Argentina, Brazil, Chile and Peru use pay-for-performance schemes to improve care quality and the performance of PHC methods. Because of health system fragmentation, PHC might be paid differently in the same country, leading to different incentives to provide effective and patient-centred primary health care.

Unlike other OECD countries, patient registration and referral systems are not fully operationalised in LAC-7 countries to favour care continuity and achieve greater care co-ordination. Chile is the only country where registration with primary health care is mandatory, while in Argentina and Costa Rica patients have financial or quality incentives to do so. Some forms of gatekeeping system exists in Brazil, Chile, Colombia, Costa Rica and Mexico, but the referral system is not compulsory and many patients bypass primary health to directly seek care in outpatient specialised clinics and hospitals. Overall, Brazil, Chile and Costa Rica have a relatively less hospital-centric health care system with more developed PHC system among the LAC-7 countries.

Analysing the composition of overall health spending in an international context indicates that LAC-7 countries spent less on PHC than other OECD countries. Brazil, Colombia and Costa Rica are clearly below the average of OECD countries on PHC spending as a percentage of current health expenditure. Only Mexico is over the OECD-28 average of 17% with 19% of its total health expenditure directed to PHC.

Table 1.1. Organisation and provision of primary health care in LAC-7 countries

	Governance of primary health care	Primary health care providers	Population per PHC unit according to national guidelines	Predominant form of organisation	Is there post-training requirement to become PCP?	Payment mechanisms	Is referral required to access to secondary care	Are patients required or encouraged to register with PHC?
Argentina	Municipalities	Centro de Atención Primaria"	3 200 ([13])	Team practice	No	Fee-for-services/P4P, global budget	Not compulsory	No
Brazil	Municipalities	Family Health Teams	2 000-3 500	Team practice	No	Global budget/fee-for-services/P4P	Not compulsory	No
Chile	Municipalities (92.6% of centres)	Centros de Atención Primaria de Salud	Urban*: 20 000-40 000 Rural: 500-4 500 ([14])	Team practice	No	Capitation/fee-for-service/P4P	Yes **	Yes (87% registered)
Colombia	MoH (MIAS)	Health posts, Health centres, Health centres with beds, local hospitals	Not available	Team practice	No	Capitation/FFS/Global budget	Yes	No
Costa Rica	MoH	CCSS through EBAIS	3 500-4 000 ([15])	Team practice	No	Global budget	Yes	Yes
Mexico	MoH (No different gov. body for PHC) Undersecy. Public Heath (MoH)	Multiple primary health care providers	Not available	Solo practice and team practice	No	NR	Yes	No
Peru	MoH EsSalud Private insurance	Multiple primary health care providers	2 000-3 200	Team practice	Yes	Capitation/FFS/P4P/Global budget	No	No

Note: * Not including emergency primary health care centres. ** Or incentivised depending on care plan. NR: No Response.
Source: Authors based on Lorenzoni et al. (2019[16]), "Health systems characteristics: A survey of 21 Latin American and Caribbean countries", https://doi.org/10.1787/0e8da4bd, and based on consultations with experts.

Primary health care helped to mitigate the impact of COVID-19 on health in LAC-7, but access to routine care was fundamentally impacted

Public health activities carried out by primary health care systems in LAC-7 countries helped to create awareness on COVID-19 and to proactively identify vulnerable people

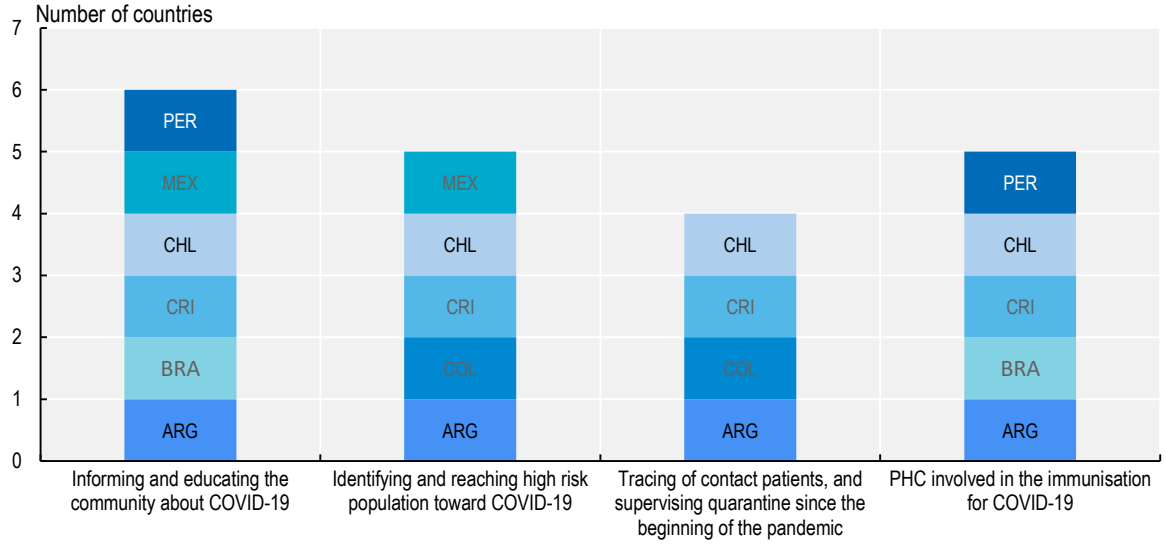
In many aspects, PHC has contributed to the COVID-19 emergency response by carrying out some public health activities (Figure 1.5). Some LAC-7 countries have used primary health care to create awareness on COVID-19 risks and tailor messages and information campaign on non-pharmaceutical intervention (such as mask wearing or social distancing). This was the case of Peru and Argentina for example, where

community health workers (CHW) provided information to patients and communities on COVID-19 diseases and on prevention of infection. By contrast in Colombia, the role of primary health care to provide information and health education to patients and communities on prevention of infection was reported to be limited. Some developments and innovations were also introduced to proactively identify and engage with high-risk individuals including elderly population, those suffering from chronic diseases, and disadvantaged population. In Argentina for example, the Sumar programme incentivised PHC physicians to actively identify people aged 64 and older without formal health coverage. Costa Rica and Mexico also focussed on reaching-out to underserved communities.

As in many OECD countries, effective tracking and tracing strategies require a well-trained and sufficient health professionals and also adequate surveillance system. Argentina (with the Detectar programme) and Colombia (with the Prass programme) are good examples of initiative to implement tracking and tracing strategies in countries with limited resources. In Peru, Chile, Brazil and Mexico, the surveillance system was not appropriate to implement effective tracing mechanism. By contrast in Costa Rica, the Local Epidemiological Surveillance Commission (COLOVE) of Health Area provided the necessary support to consolidate data of all the EBAIS to carry-out epidemiological surveillance, case studies and implement specific health actions. The registration of COVID-19 cases was carried out through the Digital Health Record (EDUS), which then linked the entire national system of the country. Surveillance systems should be highly improved and broadened in LAC-7, as well as to rely more on the involvement of PHC teams to enhance surveillance capacity at community level. This would help increase preparedness and resilience in case of future health emergencies.

While most of LAC-7 countries faced procurement issue (except Chile), LAC-7 countries have a strong tradition of carrying-out mass vaccination campaigns, embedded into the community and primary care setting and health workers' daily activity. Chile, Argentina, Peru, Costa Rica and Brazil are good examples of COVID-19 vaccination programme implemented at primary health care level. According to survey data, some people are more willing to receive a COVID-19 vaccine if the process is facilitated, such as not having to attend vaccination centres far away from their residences, while other people may just require information from community health workers in order to overcome vaccine hesitancy.

Figure 1.5. Public health activities carried-out by PHC during the COVID-19 pandemic in LAC-7 countries



Source: OECD (2021[17]), Policy Survey on the role of primary health care during the COVID-19 pandemic.

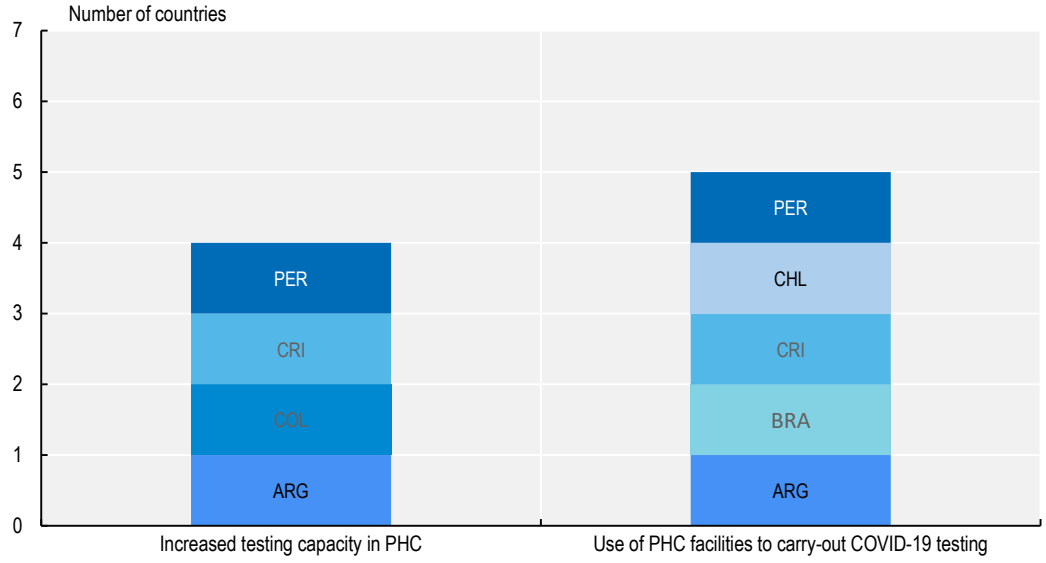
COVID-19 testing in primary and community care settings in LAC-7 countries was limited at the start of the pandemic due to low capacity

While during health emergencies, primary health care teams can play a pivotal role to carry-out early case detection in the community they operate to minimise virus circulation, LAC-7 countries had low capacity in terms of testing capacity at the start of the pandemic (Figure 1.6). To expand capacity, countries relied on foreign supply chain to acquire testing kits. As other OECD countries, Brazil and Mexico relied on 135 000 testing kits received from China (OECD, 2020[18]). Argentina, Costa Rica, Colombia and Peru expanded progressively national or local capacities. In Argentina for example, some provinces and municipalities built their testing strategies by increasing the availability of Antigen testing to be performed by primary health care workers. The country also developed its own testing kits with government-financed research from top national universities along with technology companied producing up to 100 000 testing kits per month (OECD, 2020[18]). Costa Rica and Peru created new laboratories to carry-out RT-PCR at regional level which expanded access to testing and reduced diagnosis delays.

Another limiting factors for primary health care system to carry-out COVID-19 detection was a lack of guidelines and protocols on diagnostic testing for primary health care workers. While guidelines help primary health care professionals to carry-out accurate and safe diagnosis to control the spread of the pandemic, Ministries of Health made general recommendations for COVID-19 diagnosis but rather at a late stage. In Brazil, while training videos were available in 2020 through YouTube, guidelines for primary health care workers on COVID-19 diagnosis was published in March 2021, almost one year after the start of the pandemic (Ministério da Saúde, 2021[19]). In Chile, guidelines from the Ministry of Health were established in June 2020 (Ministry of Health, 2020[20]), three months after the first case in the country. The primary health care network in each municipalities had to implement their own testing strategy before the national recommendations, leading to a great variability of the response across municipalities. By contrast, other OECD countries such as Germany and New Zealand published guidelines specifically targeted at primary health care workers.

It is also important to note that COVID-19 testing has been carried-out to some extent in primary health care settings but with high heterogeneity within and across countries. In Argentina, the DETECTAR Programme, launched by the Ministry of Health and implemented in co-ordination with the provinces in disadvantaged neighbourhoods, relied on the network of primary health care. The DETECTAR programme is based on door to door visits to carry-out COVID-19 testing. The primary health care team is composed of between 15 and 45 people, including social workers, nurses, health promoters and doctors. The programme has been progressively extended to several areas and provinces, including the greater Buenos Aires area, in urban areas of Buenos Aires, in the Provinces of Chaco, Entre Rios, La Rioja, Santa Cruz and Santa Fe (PAHO, 2020[21]). The programme is now available to all jurisdictions. The DETECTAR programme is a best practice example of good co-ordination between national government and community level. All positive cases were reported daily through the MOH's National Epidemiological Surveillance System (SNVS). Another good practice example is from Costa Rica, where all EBAIS were responsible for the detection, notification and investigation of cases. Primary health care also implemented sampling campaigns in places with an epidemiological outbreak, and screened for COVID-19 at vulnerable places or disadvantaged populations. In Mexico and Peru, primary health care workers did not have the responsibility to carry-out COVID-19 testing.

Figure 1.6. LAC-7 countries leveraged PHC to carry-out COVID-19 detection in the community



Source: OECD (2021[17]), Policy Survey on the role of primary health care during the COVID-19 pandemic.

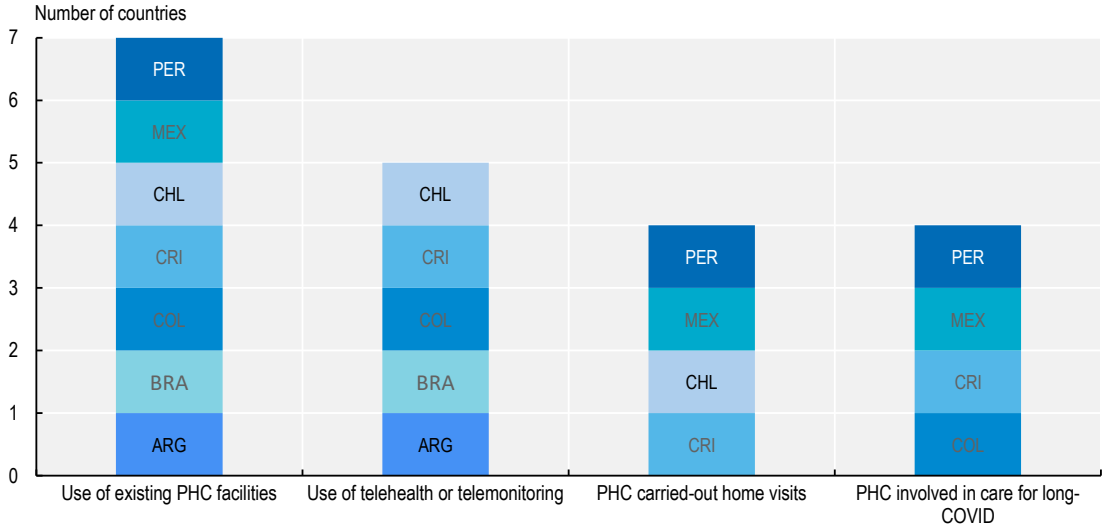
Most LAC-7 countries have developed new models of care at primary and community care settings to manage mild and moderate COVID-19

During a health emergency, PHC can absorb and respond to new health needs such as providing care for mild COVID-19 cases in the community and making appropriate referrals to hospitals. Across LAC-7 countries, there are good local experiences where primary health care has been effective to absorb the surge in demand, through for example the use of existing primary health care facilities, making quick and effective referral to hospitals and the development of new model of organisation such as home visits and telehealth (Figure 1.7).

Despite initial delays to adapt to the health emergency and increased influx of patients, all LAC-7 countries implemented comprehensive adaptations to PHC to advise suspected or confirmed patients in home isolation or at the PHC unit when more treatment was necessary. Mexico, where emergency rooms have traditionally been considered as the main point of entrance to the health care system, have remarkably developed new Respiratory Care Modules (*Módulos de Atención Respiratoria des Seguro Social, MARSS*) to managing suspected or confirmed cases of COVID-19 in PHC settings. Costa Rica also introduced comprehensive adaptations to PHC services to treat for mild COVID-19 cases. From the start of the pandemic, the PHC system was placed at the centre of the health system to manage the unexpected surge of demand and avoid overcrowding in hospitals. The country separated care pathways for COVID-19 patients and non-COVID-19 patients at the primary health care units to respect social distancing protocols and ensure patient safety. Rapid response teams in PHC, which comprises doctors and nurses, were responsible for the follow-up of cases and clinical care for COVID-19. In Chile, during the first months of the pandemic, PHC played a relevant role in caring for mild COVID-19 cases through home visits with medical, nursing and physiotherapist professionals. In case patients had more severe symptoms, transfers to PHC units were organised in order to provide hydration, low-oxygen therapy and clinical surveillance.

The quick and effective response from the Costa Rican and Chile PHC system to manage mild COVID-19 cases in the community is undoubtedly related to its pre-pandemic central role in providing comprehensive, continuous and co-ordinated care. By contrast, in Peru and Argentina, a lack of resources and an unclear mission and vision for primary health care severely limited PHC's scope in this core function.

Figure 1.7. Primary health care in LAC-7 countries has managed mild COVID-19 care needs in the community



Source: OECD (2021[17]), Policy Survey on the role of primary health care during the COVID-19 pandemic.

Follow-up of COVID-19 cases were conducted through teleconsultations or home visits by PHC teams

Faced with significant disruptions to in-person care, governments and health care providers moved quickly to promote the use of remote care in LAC-7 countries. Although teleconsultations predate COVID-19, the pandemic has been a watershed moment in its uptake by both health professionals and patients.

As in other OECD countries, the use of teleconsultations facilitated patients' access to care, while reducing pressure on hospital care. Teleconsultation services were mainly used for home monitoring and follow-up of COVID-19 (for example in Argentina, Colombia, Costa Rica) and for maintaining access to care for non-COVID-19 needs (for example in Argentina, Brazil or Peru). In Costa Rica for example, a Health Supervision Program integrated by 50 primary care physicians gave continuous medical information to patients with doubts or concerns via phone. In Colombia, teleconsultations were used by people in confinement or preventive isolation, population groups with a higher risk of complications from COVID-19 and to maintain some forms of preventive and routine health services. From December 2019 to April 2021 there was a 184% increase in providers authorised to perform telemedicine (5 302 providers) and a 264% increase in types of services provided (21 094 telemedicine modality).

Argentina's TeleCOVID programme provided remote care for people with a suspected or confirmed diagnosis of COVID-19 and for other vulnerable patients such as elderly people. Available evidence show good patient and physician experience with the use of TeleCOVID system: 77% of patients positively evaluated their experience with the teleconsultation and up to 82% of health professionals reported they are familiar with the teleconsultation modality. Chile capitalised on its existing Digital Hospital tool to support both patients and medical staff during the pandemic, as it offered COVID-19 disease management seminars and instructional videos for self-care. From July to December 2020, 580 609 teleconsultations in PHC were carried out, and a further 472 751 in the next semester.

There are however multiple underlying challenges that must be overcome to remove barriers and make sure they become part of mainstream care delivery. For instance, low levels of internet connectivity and low digital literacy in some countries has considerably limited the use of telehealth solutions by PHC (Carrillo-Larco et al., 2022[22]). In Peru for example, precarious ICT infrastructure in PHC units has limited the potential to use teleconsultation as over 80% of health centres lack internet connection (Carrillo-Larco et al., 2022[22]).

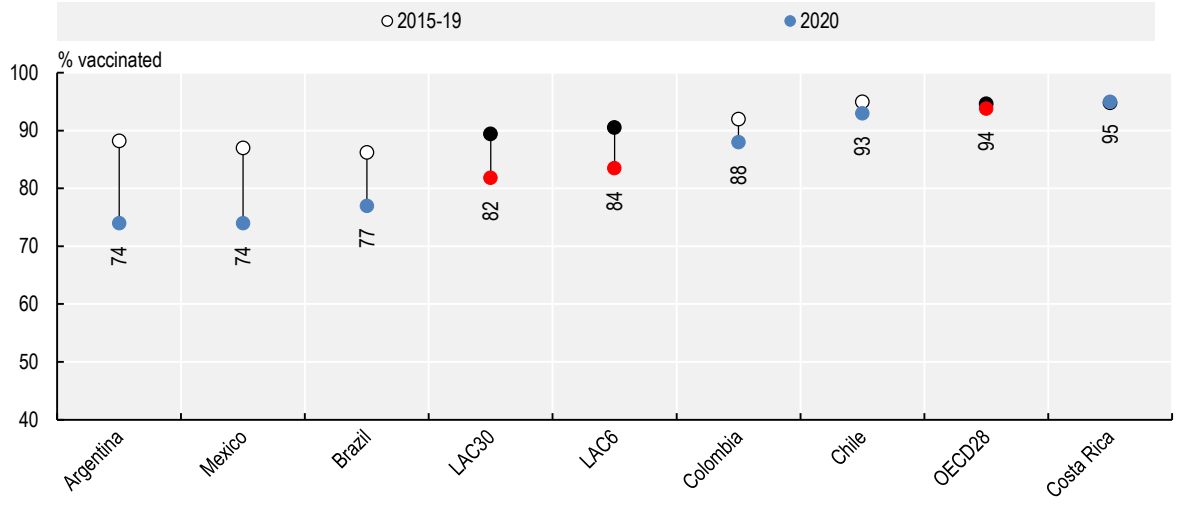
In addition to telehealth solutions, several LAC-7 countries provided home-based care visits by PHC teams. These strategies vary from simple follow-up sessions with isolated patients, as is the case of Peru, to more complex and organised policies, such as in Mexico. In Peru, follow-up care for isolated patients is conducted by Integrated Intervention Teams (EIIs) through regular telephone and home visits by CHWs. In Mexico, the Brigadas Especializadas (specialised brigades) imply a high level of co-ordination with the local PHC clinic and the health promotion brigades. This type of co-ordinated work, grounded in the local community, is particularly well suited to reach more isolated communities.

Primary health care was not able to maintain continuity of access to care during the pandemic in LAC-7 countries

Social distancing measures and fear of catching the virus are leading factors that have caused considerable disruptions in the provision of care worldwide. In all LAC-7 countries, the three core functions of primary health care have been dramatically impacted with significant reduction in health promotion and vaccination, in screening programme and in treatment for some types of cancer, hypertension and diabetes. Across high income countries, evidence shows how delay or missing regular care can exacerbate complications and lead to severe health consequences – putting additional, and potentially avoidable, pressure on health systems (OECD, 2023[23]).

Disruption of primary prevention is demonstrated by declines in vaccination services. Coverage for DTP3 vaccines amongst children aged 1 have fallen by 8% in 2020 across the LAC-7 countries in 2020 (at 82%) compared to the average between 2015 and 2019 (at 89%) (Figure 1.8). Largest reductions are found in Argentina, Mexico and Brazil. Such changes in vaccination coverage is alarming, with large implications on vaccine-preventable disease eradication. Catch-up vaccination plans, included enhanced outreach services or intensification of routine immunisation services, must be strengthened across LAC-7 countries to ensure that those who missed vaccinations (often the most vulnerable children) catch up and return to pre-pandemic level. This will be crucial for full recovery. There are successful experience across other OECD countries such as the Netherlands or Canada, which implemented catch-up programmes with tailored communication campaigns.

Figure 1.8. Diphtheria, tetanus toxoid and pertussis (DTP3) immunisation coverage amongst children aged 1 (%), 2015-19 average and 2020



Source: WHO (2022[24]), Global Health Observatory, available at https://www.who.int/data/gho.

Similar reduction have been observed when it comes to secondary prevention. Early detection services in LAC-7 countries have been severely affected, with some countries showing large reductions in cancer screening coverage. In Chile, cervical and breast cancer screening dropped by 10% in 2020 compared to 2019, while early detection of diabetes and hypertension dropped by more than 20% over the same period. In Mexico, from April to December 2020, breast and cervical cancer screening dropped by 79% and 68% respectively. In Peru, both screening programmes reduced by 50%. Disruption are also confirmed by the WHO Pulse survey (WHO, 2022[25]), which shows that 50% of cancer screening services were disrupted in Argentina and Brazil in 2021, compared to 5% in Costa Rica.

People with chronic conditions were particularly impacted by care disruption, which can lead to severe consequences and long-term complications. Patients suffering from cancer have seen their treatments and surgeries being postponed or even cancelled. A survey of 704 oncology doctors from 19 LAC countries found that 65% of the respondents reported delays in referrals to surgery and 20% affirmed having to cancel life-saving procedures (Bernabe-Ramirez et al., 2022[26]). The number of treatments for cancer saw steep declines in countries like Peru, Brazil and Chile. The number of consultations for hypertension and diabetes – two conditions commonly treated at the PHC level and considered as high-risk factors for COVID-19 – decreased by 80% and 81%, respectively, in 2020 in Chile when compared with pre-pandemic values. Mexico and Costa Rica also reported worrying decreases in consultations for these conditions (Arsenault et al., 2022[27]).

Overall, disruptions in primary, secondary and tertiary prevention in LAC-7 countries show how primary care systems in these countries were not resilient enough during the COVID-19 pandemic. It calls for actions to strengthen primary health care system to improve health system resilience to future health crises notably to maintain care for patients with other health care needs.

Making primary health care central to improve preparedness and resilience during health crises

Improving population health and reducing health inequalities through stronger primary health care

Encourage greater comprehensiveness of PHC toward prevention and management of health conditions

Primary health care services which act as the primary source of care to address the majority of patient needs enable the efficient delivery of crucial health services, including vaccination, screening, early detection of disease and patient-centred management. In addition, primary health care systems can contribute to proactive primary prevention to address major risk factors to health and influence patient's lifestyles which contribute to both infectious and non-communicable disease burden. An extensive body of literature demonstrate the effectiveness of interventions implemented in primary health care settings to address risk factors to health such as heavy drinking, unhealthy eating, or physical inactivity (Jané-Llopis et al., 2020[28]; OECD, 2022[29]). Such strong primary health care systems delay the onset of chronic disease, decreases the need for hospitalisation and reduces avoidable mortality (OECD, 2020[30]; Sandvik et al., 2022[31]).

The beneficial impact of strong primary health care on population health is particularly relevant in the context of COVID-19 or any other pandemic. Research from several countries shows that COVID-19 symptoms and outcomes are more severe in people having chronic diseases, underlying health conditions, or the most disadvantaged population (Centers for Disease Control and Prevention, 2022[32]; Honardoost et al., 2021[33]).

Overall, improving population health through prevention, treatment and effective management of health conditions in primary or community settings, and addressing inequities in risk factors for health will make population more resilient against COVID-19 and potential future outbreaks of infectious diseases. This will reduce both the inequities in outcomes and the demand for acute services during a crisis, improving the performance of health system in LAC-7 countries.

This is even more important given the increasing prevalence of risk factors to health and the rising burden of chronic conditions in LAC-7 countries. Already in Chile, primary care practices are key actors in health promotion activities, for instance through the Vida Sana counselling and physical activity programme. This is a best practice example across the OECD from which other LAC-7 countries could learn. Across other OECD countries, Sweden and the Netherlands are also good example of countries encouraging healthy eating and active lifestyles through primary health care. In the Netherlands for example, Combined Lifestyle Intervention (CLI) are offered to patients with overweight of other risk factors. The CLI provides dietary advice, physical activity training, and counselling on behavioural change over a period of two years. Participants are referred by their general practitioner to a local CLI provider which can include physiotherapists, lifestyle coaches, and dieticians – either working individually or in a group.

Moving forward, LAC-7 countries need to renew PHC foundation to make it the front-door of their health system to provide comprehensive services ranging from primary prevention to tertiary prevention, and without distinction of any economic and social conditions. A stronger gatekeeping function for primary health care, with systematic patient registration and referral system, will help to deliver a range of crucial health services, including vaccination, screening, early detection of disease and patient-centred management to improve population health, and reduce social health inequalities.

Capacity building is necessary to ensure that primary health care can deliver its core functions

In order to increase key primary health care functions, it is critical to ensure that providers have the right equipment, incentives and training. The success of screening and early detection programmes for example has several determining factors, including the structural capacities of a country to support PHC efforts. All countries in LAC-7 countries have created national plans placing early detection of diseases as one of the health system central pillars. While such national plans describe the target population, screening intervals, and screening tests, others minimal requirements are also needed including for example the availability of equipment or a system to identify eligible populations.

One of the key enablers for conducting cancer screening is the availability of equipment. While all LAC-7 countries define mammography as the main method for breast cancer screening, mammography units per million women aged 50-69 are considerably lower than across other OECD countries. Costa Rica is close to the OECD average, having 150 mammography units per million women aged 50-69. However at the lower end of the scale, Colombia and Chile have respectively 12 and 32 units per million women aged 50-69, well below the LAC-7 average of 76 mammography units and the OECD average of 181 mammography units. Due to lack of equipment and capacities in LAC-7 countries, some screening programmes are still underperforming, as in Peru and Brazil for example.

Another key enabler is the assignment of stakeholder's responsibilities', together with a system to hold them accountable for such responsibilities. A pay for performance scheme can create an effective system of accountability to improve care quality. In Colombia and Mexico for example, there is no accountability frameworks to monitor outcomes and performance of primary health care providers towards cancer screening rates. By Contrast in Chile and Brazil, accountability for performance measures (such as screening coverage rates) based on a pay for performance scheme for PHC exist, providing good incentives to improve care quality. The experience from Costa Rica is also instructive. The country has a detailed protocol for PHC to actively engage patients into screening and early detection programmes. The questionnaire is registered in a centralised information system, and allows for the estimation of the risk of developing some types of cancer and, if deemed target population, there is a referral to more specialised

care. Such protocols are effective to help early diagnosis, and detecting cancer signs and symptoms to improve diagnostic accuracy, and establish reliable referral mechanism.

It is also important to have a centralised information system to help identify the target population. The Cancer Information System called SISCAN, together with the national health information platform "e-SUS" used at primary health care level in Brazil, and the screening information system called SITAM in Argentina are examples of centralised information systems that support the implementation of screening and early detection programmes. Such centralised information system can help implement a more personalised approach to identify and invite people with a high risk of cancer, but also to monitor and evaluate the effectiveness of early detection and screening programmes.

Lastly, to perform effective early detection of disease and patient-centred disease management, primary health care workers in LAC-7 countries should have appropriate training and guidelines to help them deliver quality actions and services. As earlier mentioned, during the COVID-19 pandemic, Ministry of Health in some LAC-7 countries made general recommendations for COVID-19 diagnosis, but sometimes at a late stage, requiring some local or subnational actions that were timidly co-ordinated. In Chile, guidelines from the Ministry of Health were established in June 2020 (Ministry of Health, 2020[20]), three months after the first case in the country. The primary health care network in each municipalities had to implement their own testing strategy before the national recommendations, leading to a great variability of responses across municipalities.

Overall investing in the right equipment, accountability mechanisms, guidelines and trainings are key tools to improve the capacity of primary health care systems to deliver its key functions prior a pandemic occurs, but also during a health emergency. These are essential to absorb and recover from a shock by meeting both COVID-19 and non COVID-19 needs.

Greater workforce investment and planning is needed

Without effective policy action, the existing health worker shortages are projected to persist by 2030

A novel OECD analysis suggested that, in 2020, the demand for physicians, nurses and midwives exceeded their supply in all LAC-7 countries, with the estimate shortage of these health workers averaging at around 1.11 per 1 000. In this year, the shortages in the density of physicians, nurses and midwives were estimated to be the greatest in Argentina (2.42 per 1 000 inhabitants) and the lowest in Brazil (0.26 per 1 000 inhabitants). These shortages in the availability of health workers hinder the ability of the health systems in LAC-7 countries to address the health needs of the population and can stymie efforts to respond to health emergencies.

Without robust policy action, the existing shortages between the demand and supply of physicians, nurses and midwives are expected to remain a non-negligible challenge in all LAC-7 countries by 2030. The OECD analysis suggests that, by 2030, the shortages in physicians, nurses and midwives are projected to average at around 1.03 per 1 000 inhabitants across all LAC-7 countries. Importantly, LAC-7 countries are expected to diverge in terms of their projected health worker shortages. For instance, the estimated health worker shortages in Brazil, Chile, Colombia and Costa Rica are expected to grow over by 2030. In contrast, Argentina, Mexico, and Peru are expected to make modest gains in the availability of health workers though the gap between the demand for and supply of physicians, nurses and midwives in these countries are projected to persist.

In most LAC-7 countries, national and subnational authorities are tasked with assessing human resources for health (HRH) needs but national-level HRH assessments are not always available

Most LAC-7 countries assess their HRH needs in decentralised settings where national and subnational governments share roles and responsibilities around understanding HRH needs. All LAC-7 countries except Mexico and Costa Rica have units within the Ministries of Health that are dedicated to understanding HRH needs in the short and long term. Typically, these departments play a vital stewardship role in examining health workforce trends, developing, and implementing HRH policies. In lieu of stewardship at the national level, each network of health care providers in Mexico evaluates their own HRH needs. Whereas in Costa Rica, the Social Security Fund carries out periodic assessments of HRH needs for its own network of providers. In most LAC-7 countries, subnational authorities also have the discretion to examine local HRH needs.

Efforts to examine HRH needs can be strengthened by supporting local communities which may lack the technical capacity and financial resources to assess their own needs. Available evidence points to important discrepancies between local communities within LAC-7 countries in terms of their technical capacity and the availability of financial resources, which may hinder the ability of these communities to assess their own HRH needs. In recognition, it is vital to provide support to local communities that lack the sufficient scale, technical and financial capacity to assess their own HRH needs. For instance, Peru developed a set of technical guidance notes in 2014 targeting sub-national authorities that detailed methodological approaches to assessing HRH gaps at the primary, secondary and tertiary care.

In addition, addressing HRH needs will require close collaboration and co-ordination between various stakeholders across multiple sectors. For instance, HRH policies that aim to expand professional training opportunities and education capacity will necessarily involve collaboration and co-operation between the Ministries of Education and Health. Moving forward, it will be crucial for LAC-7 countries to build forums (e.g. advisory boards, inter-institutional commissions) that can help facilitate cross-sectoral collaboration and co-ordination.

There is a pressing need for systematically assessing short- and long-term HRH needs

Despite recent improvements in data availability, most LAC-7 countries do not assess their health workforce needs on a regular basis using standardised approaches. The existing administrative data sources offer a good starting point to facilitate HRH assessments, but LAC-7 countries do not consistently use the readily available data sources to assess their HRH needs. The OECD analysis revealed that, to date, assessments of HRH needs have been made public in Argentina, Brazil, Chile, Colombia and Peru, but there is further scope for building on these works. For instance, most HRH assessments from these countries focus on medical specialists and physicians, though some countries like Chile made efforts in the past to expand the scope to other health workers like general practitioners. Further, previous HRH assessments looked at needs for single professions in isolation from one another. However, the centrality of multi-disciplinary PHC teams in health care service provision necessitates adopting more integrated approaches that also focus on multi-disciplinary teams.

LAC-7 countries can benefit from examining factors that influence the supply of workers in their health labour markets. The OECD analysis revealed all LAC-7 countries primarily collect information on the inflow of medical graduates. While these countries have been increasingly relying on foreign-trained health workers, the inflow of foreign-trained health workers are routinely monitored only by Colombia, Chile, and Brazil. Importantly, there is very little evidence on the impact of increased reliance of foreign-trained health workers on health system performance over time. There are similar gaps in understanding factors that influence the outflow of health workers in LAC-7 countries. For instance, only Colombia and Argentina have information systems that track trends in retirement among health workers, and only Chile appears to have information systems in place to examine trends in the out-migration of health workers. Further, while

all LAC-7 countries track head counts in order to assess the stock of health workers, only Peru and Argentina collate data on the workload of health workers.

LAC-7 countries primarily consider population size in their HRH assessments, suggesting that there is substantial room for improving methodologies that examine factors that determine the demand for health workers. For example, epidemiological factors and changing patterns in health service utilisation are only considered in assessments from Costa Rica, Colombia and Chile. Similarly, only two LAC-7 countries – Mexico and Colombia – consider economic factors like growth in health worker salaries in their methodologies.

Expanding the role of existing health professionals, including nurses and community health workers, can help coping with health workforce shortage

There is growing attention toward the important role played by CHWs and advanced nurses to deliver some health services traditionally provided by physicians. Many OECD countries have begun implementing measures to increase the supply of health care workers on a more sustainable basis. These include, beyond increasing the training and recruitment of new staff, re-evaluating the scope of practice attributed to health care staff such as nurses and community health workers. As of May 2022, 60% of OECD countries are planning to introduce expanding roles to relieve pressure on medical practitioners (OECD, 2023[23]).

Unlike other OECD countries, LAC-7 countries have not yet experimented with changing the scope of practice and rearranging tasks from physicians to non-physician health workers. Available evidence has suggested a positive impact of changing scope of practice to provide quality preventive health services (Brennan, Charest and Turpin, 2022[34]), to perform chronic disease management, and with improved patient satisfaction, reduced hospital admission, and mortality rates (Maier, Aiken and Busse, 2017[35]; AHA, 2018[36]). The most recent systematic review also suggests that CHW programmes are effective, (notably for improving immunisation uptake, breastfeeding, and improving child health) and cost effective (for example on HIV) (WHO, 2020[37]).

LAC-7 countries could thus make the most of their existing network of community health workers and nurses to help alleviate persistent workforce shortage. Already during the pandemic, CHWs carried out essential public health services in the primary health care sector including public health surveillance and patient education in Argentina, Brazil, Costa Rica, Chile, Mexico and Peru. LAC-7 countries should go beyond with extended roles and responsibility for CHWs and nurses in advanced practices. This calls for education and training programmes to professionalise CHWs and nurse. Key examples for learning are available internationally, such as in the United States, where States have developed CHWs' training and curriculums at academic institutions.

Investing in stronger health information infrastructures is a must

There are many benefits of strong and consolidated health information infrastructures. First, interoperable health information infrastructure, based on Electronic Health Record, is key to engage in health monitoring and disease surveillance, and to implement relevant public health action to improve population health. Second, during health emergencies like COVID-19, timely data on hospitalisations, medical resources and mortality is key for decision making. Third, moving beyond the demand side, it is also critical to have reliable and complete administrative data on health workers to face a health emergency and to benchmark workforce needs over time.

Most LAC-7 countries could benefit from a single interoperable Electronic Health Records

A greater use of EHR, consolidated at national level, is an important step to better engage in health monitoring and disease surveillance. It is a key tool to provide a good understanding of the health status

of the population. It allows to collect and analyse data for public health purposes and to disseminate public health information to assess and respond to emerging public health problems.

During a pandemic, quick access to patient information and risk factors to health allows to identify and monitor those in high-risk groups and aggregate data at community level to support decision making about prevention and control of infection. In Costa Rica and Chile more than 80% of PHC physicians have implemented EHR, which has proven to be effective during the COVID-19 pandemic. In Costa Rica for example, the CCSS has developed the Unified Digital Health Record (*Expediente Digital Único en Salud* – EDUS) which is used by all primary health care teams. EDUS make patient charts to function as clinical guides and to create reminders for primary health care providers. This helps to keep track of individual patient history (for example on vaccination records) and risk factors for health, and conduct epidemiological surveillance. All the data is funnelled up to the health area and to the national level, but it is also used at the local level by EBAIS teams to make improvement plans or to carry out targeted actions.

By contrast, the use of EHR is still fragmented in Argentina, Mexico, Peru, and Colombia. In Mexico for example, the first electronic health records in PHC facilities were introduced in 2003 by IMSS as a part of the family medicine improvement initiative. Currently, the fragmented public health sector has 65 different EHR systems that vary in content, information sources, and human resource capacity to manage them. This situation negatively affects reliability and information sharing for disease surveillance.

Due to poor health information infrastructure, contact tracing and quarantine supervision was lacking across most LAC-7 countries. In Brazil, Peru, Chile and Mexico, the surveillance system was not appropriate to implement effective tracing and tracking mechanism. In Chile for example, the public health surveillance system, EPIVIGILA, was supposed to work in real-time regarding infectious diseases notification either confirmed or probable cases. However, the high demand on health care overloaded the system during the beginning of the pandemic, effectively delaying data registration in EPIVIGILA. At first, the surveillance system only allowed the registration of a limited number of contacts, and it lacked the necessary data fields for tracing COVID-19 cases efficiently. Furthermore, EPIVIGILA is not interoperable with Electronic Medical Records in primary care or with the National Registry of Immunisations, making difficult disease outbreak response.

Having real-time data on outbreaks, collected for example by PHC centres or teams, could help prevent clusters and save lives by acting before community spread starts or goes exponential. In addition, establishing regional bodies to allow for the sharing of these data between countries could also help control outbreaks that may occur in areas close to national borders. A broader and more accurate surveillance strategy with proper databases on confirmed and suspected cases -as well as their close contacts- would facilitate the tracing of patients and the subsequent supervision of their quarantines when needed. Some good examples of initiatives to strengthen surveillance system and to implement tracing strategies can be found across other OECD countries. In Luxembourg, an effective contact tracing system was set up to identify contacts, administer quarantine and isolation, and manage clusters of infection (OECD, 2022[38]). The contact tracing team comprised 200 people, and the system provided positive results. The time between identification of laboratory confirmed cases and notification was generally 24-48 hours, and it provided personalised support. The contact tracing strategy was supported by the newly established “Qlick” health information infrastructure and the Care+ platform.

There is scope for improving the existing health workforce data infrastructure and information systems

LAC-7 countries made important strides in recent years to improve health workforce data infrastructure and information systems. Today, all LAC-7 countries except Costa Rica have national registries that collate basic information on the characteristics of health workers.

Moving forward, there is a pressing need to build on the strengths of these registries and data infrastructure by improving the coverage and quality of available data. In many LAC-7 countries, administrative data on health workers suffer from inconsistencies in the definition of key indicators, prolonged delays in data entry and updates, lack of comparable data over time and across geographic locations.

Further, data on the availability of primary health care teams over time is not publicly accessible in most LAC-7 countries except in Brazil, Peru and Costa Rica. Additionally, in many LAC-7 countries, private sector providers play a crucial role in service provision but key information for health workers that work in the private sector is often unavailable. Improvements in these areas can help enable benchmarking of HRH needs over time, geographic areas, and type of providers.

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Note

[1] *LAC-33* is used to refer to the average for the 33 LAC countries.