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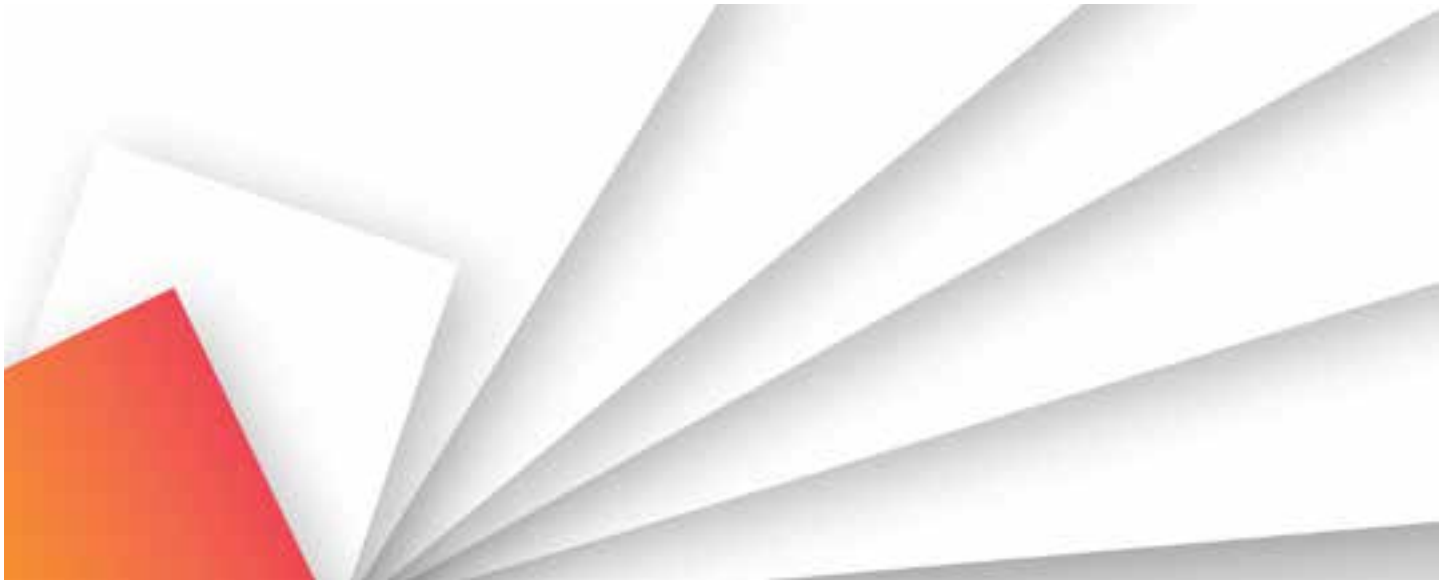

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# Contents

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# Executive summary

Successful pandemic responses require state capacity, societal trust and effective leadership. Leadership and governance challenges in Peru hampered COVID-19 response efforts, leaving citizens exposed and vulnerable.

Historical debt has contributed, over time, to inequities in basic services (housing, water, sanitation, electricity, Internet and mobile-cellular phone coverage) and gaps in the health system. There is an imperative to address health system fragmentation through integrated financing, decentralization, improving public sector management and reducing corruption. Policies implemented prior to the COVID-19 pandemic enabled modest improvements on social protection indicators, but there has been very limited emphasis on closing structural gaps that underpin persisting inequities.

Improving the quality of primary care services, as part of a primary health care (PHC) approach, is essential. However, early decisions to suspend PHC services at the start of the COVID-19 pandemic in 2020 suggested that the government may have underestimated the value and utility of PHC in a pandemic context. Even after primary care services resumed, various limitations including insufficient infrastructure, human resources and supplies of medicines and oxygen were evident. The referral system was initially limited to COVID-19 patients, but was later expanded to maternal and child health interventions and chronic diseases. Over time, hospital services became overloaded, especially in Peru's main cities.

COVID-19 data on morbidity and mortality reflect the limited coverage and low quality of health services (from both state providers and the private sector), weak governance and low levels of trust. The high mortality rates from COVID-19 in 2020 and 2021 were driven by structural deficiencies within the health system, resulting in fragility, fragmented service provision and weak governance.

# Introduction

The region of Latin America and the Caribbean (LAC) has high levels of income inequality and urbanization. This leaves a large percentage of the population exposed and vulnerable to infectious disease outbreaks *(1)*. The COVID-19 outbreak occurred suddenly, within a complex economic, social and political context and at a time of low economic growth and high levels of informal labour. Structural challenges of poverty, deep inequality across different dimensions, and weak health and social protection systems exacerbated the region's vulnerability to the pandemic *(2–6)*.

In December 2019, pursuant to resolution WHA72.2, the Director-General of World Health Organization (WHO) developed a draft operational framework for primary health care (PHC) *(7)*. This framework includes four core strategic levers and ten operational ones. The strategic levers are:

- Political commitment and leadership that place PHC at the heart of efforts to attain universal health coverage (UHC) and that recognize the broad contribution of PHC to the Sustainable Development Goals (SDGs).
- Governance and policy frameworks and regulation in support of PHC that build partnerships within and across sectors, and that promote community leadership and mutual accountability.
- Funding and allocation of resources for PHC to minimize financial hardship, promote equity and enable high-quality care and services.
- Engagement of communities and other stakeholders from all sectors to define problems and solutions and to prioritize actions through policy dialogue.

This country case study draws on these strategic levers and the 2018 Astana Declaration to examine PHC in the context of the response to the COVID-19 pandemic in Peru between January 2020 and August 2021. It examines national performance across three inter-related and synergistic components of PHC *(8)*:

1. Meeting people's health needs through comprehensive promotive, protective, preventive, curative, rehabilitative and palliative care throughout the life course.
2. Systematically addressing the broader determinants of health (including social, economic and environmental factors, as well as individual characteristics and behaviour) through multisectoral collaboration and evidence-informed policies and actions across all sectors.
3. Empowering and engaging individuals, families and communities to optimize their health.

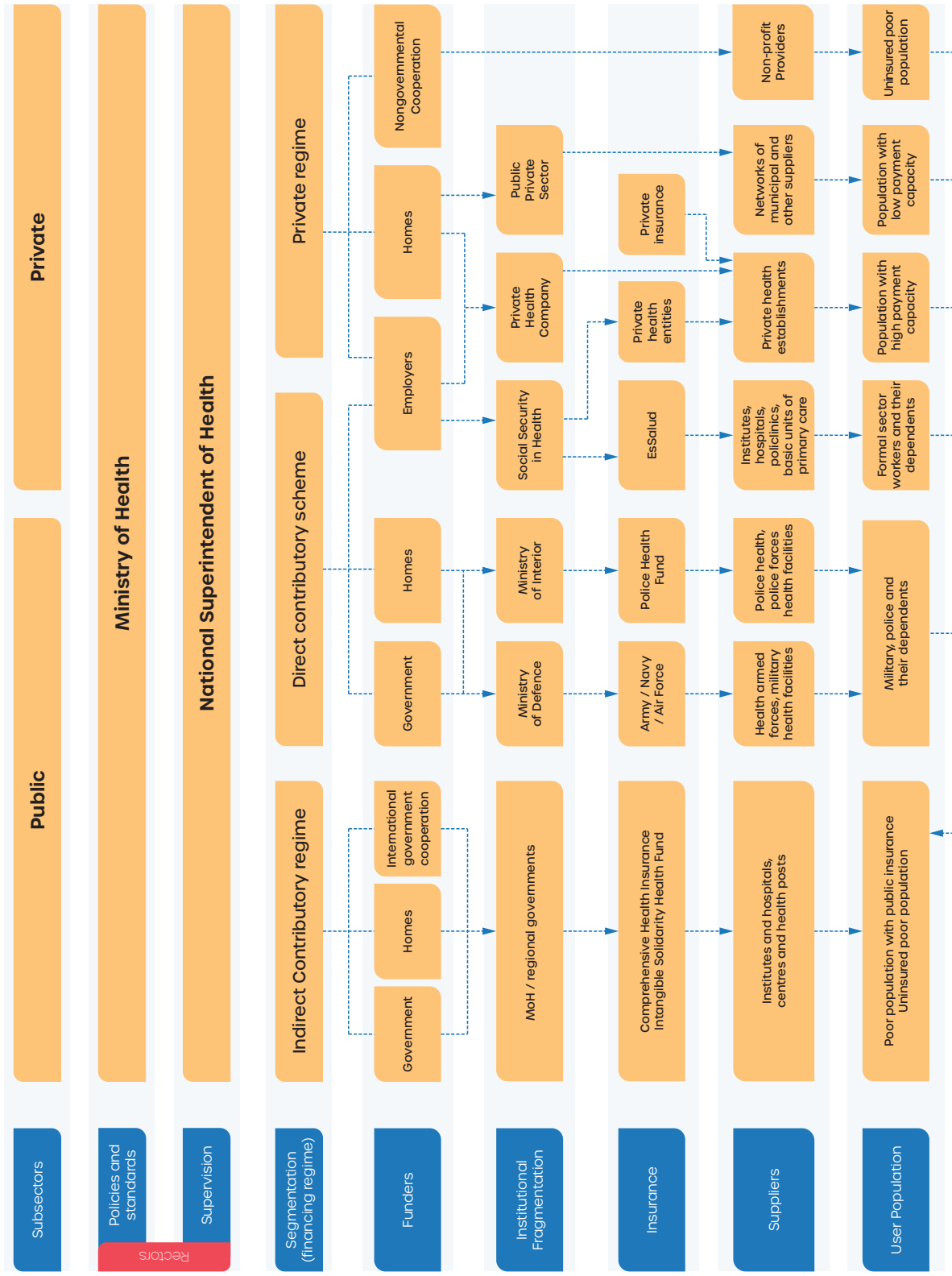
## National context

Peru is a middle-income country with a population of more than 33 million people in 2021 *(9)* and an annual population growth rate of 1.18% *(10)*. Gross domestic product (GDP) is estimated at US$ 13 416 per capita *(11)*. Life expectancy at birth is 79.8 years for females and 74.5 years for males. The population density is 25 persons per square kilometer, although this differs markedly between and within different regions. Within each region, greater concentrations of the population are located in the main cities; only one third of the population lives in rural areas *(12)*.

The segmented and fragmented Peruvian health care system is "the product of the superposition of diverse organizational structures coming from different health system stages, tributaries of diverse conceptions and bearers of varied interests, cultural patterns, forms of financing, and models of government, of management, and of provision; accumulated like geological strata, some of them going back to the colonial world" *(13)*. This fragmentation contributes to limited coverage and effectiveness – the different health service provider institutions (IPRESS, in Spanish) are not integrated into a centralized service network and this affects continuity of patient care.

The IPRESS – of which there are 23 889 – are directed by six national organizations (the Ministry of Health (MoH, or MINSA in Spanish); the EsSalud health and social security programme; Army, Navy and Air Force Health; and National Police Health), plus 25 regional directorates that are dependent on their respective regional governments (Fig. 1). The MoH and the regional governments have an extensive network of primary care services (Level I facilities) – largely oriented to maternal and child services, and tuberculosis and HIV control – with limited capacity and capability to meet demand; a hospital network with intermediate capacity (Level II facilities); and some specialized institutes (Level III facilities).

## Figure 1. Organizational structure of the health system




Source: Lazo-Gonzales et al., 2016 *(13)*.

The MoH is responsible for implementing and financing all public health interventions, as well as financing and managing public primary care facilities, hospitals and the National Institutes of Health in the Lima metropolitan area, while the regional governments are responsible for managing the public health facilities in their jurisdiction. This model implies the need for vertical communication between the different levels of government to achieve a coordinated response to health emergencies. In addition, the strength of the second largest service network in the country – EsSalud – lies in its highly complex hospital centres; however, it offers very limited sprimary care services (Level I).

The four other public subsystems of the health sector (three of which are for the armed forces and the fourth for the national police) do not offer extensive primary care services. They have only a few Level II hospitals that provide secondary care nationwide and national hospitals (Level III care) based in Lima. Finally, a small private sector operates in Peru's large cities to provide secondary and tertiary care.

On 31 January 2020, the Peruvian MoH, through Ministerial Resolution 039-2020/MINSA, approved the National Plan for Preparation and Response to the Risk of Introduction of the Coronavirus 2019-nCoV *(14)*. This plan was designed to reduce the health, social and economic impact of COVID-19 and to strengthen surveillance, containment and response systems. The first confirmed case of COVID-19 was reported on 6 March 2020. A national state of emergency was declared on 15 March 2020 through Supreme Decree No. 044-2020-PCM *(15)*, and on 16 March 2020 quarantine measures were implemented, lasting until the end of June. By 1 August 2021, Peru had recorded 2 109 294 confirmed cases of COVID-19 and 196 291 related deaths *(16)*.

## Methodology

A scoping review was conducted to identify research articles, government reports and protocols, institutional reports, and news articles relevant to PHC in the context of the COVID-19 pandemic. Documents were identified using PubMed, Alicia, Google and Google Scholar.

The document review was supplemented by stakeholder consultations with key policy-makers and experts in PHC, including former representatives from seven regional health authorities nationwide, health personnel from three regional directorates or Directorate of Integrated Health Networks (DIRIS), and four health personnel from primary care facilities in Lima and Huancavelica.

## How primary care and essential public health functions are responding to COVID-19

### Health governance

The COVID-19 pandemic revealed two fractures in the national health system: firstly, there was weak state capacity to guarantee public services and ensure minimum conditions for self-care to reduce the chances of infection; and secondly, there were gaps in the delivery of health services and goods.

Good governance refers to the ability to effectively execute decisions and achieve adequate coordination between private and public actors involved in policy implementation, with strong public institutions *(17)*. In the COVID-19 context, governance limitations were evident in the provision of public services, including health care. Three processes have contributed to this condition of limited governance in Peru: 1) privatization, displacement of the role of the state in favour of the market and consequently a reduction in the provision of public goods and services by the state; 2) decentralization; and 3) the delegation of public policy responsibilities to private actors at subnational levels *(18)*.

The MoH has limited power to exercise its leadership within DIRIS and regional health authorities, and within other health subsystems. Management Agreements (or *Acuerdos de Gestión*) *(19)* commit regional health authorities and the DIRIS to the achievement of agreed goals in response to national health policies and priorities. However, despite these agreements, the proportion of goals achieved is low *(20)*. Political instability and high turnover of management cadres in the health system also hinder coordinated leadership and decision-making. In 2020 there were five health ministers; 11 were appointed in the previous presidential period; and fifteen vice ministers were appointed in each of the vice-ministerial offices.

Health Insurance Fund Administrator Institutions (IAFAS, in Spanish) are the administrative entities of the different funds that finance health expenses, and they are grouped into five categories: public, health provider companies, prepaid, self-insurance and insurance companies. IAFAS develop the institutional arrangements for health service payments, which further complicates the relationship between subsystems. These characteristics "increase inequities in access and reduce efficiencies, both in clinical management and service management" *(21)*.

Stakeholders reflected that the different institutional mandates and care practices, administrative arrangements and affiliation mechanisms, financing mechanisms and purchase of services of each of these subsystems have become barriers to their integrated action in the network. Moreover, health services are disproportionately oriented towards hospital-based facilities (Level III hospitals and specialized institutes) despite these facilities only attending to 5–10% of demand for health care *(22, 23)*.

The first confirmed case of COVID-19 was reported in Peru on 6 March 2020,

at which point primary care facilities were closed. This meant that control of the pandemic was assumed by the hospitals. Nonetheless, primary care played a limited but important role in disease prevention and early treatment. Stakeholder comments indicated that the PHC system was of particular value in rural areas where there is an absence of secondary (Level II) and tertiary (Level III) care compared with the Lima metropolitan area and the regional capitals.

The public goods and services that make up minimum conditions for adequate self care include: formal employment, decent housing, provision of food, Internet connectivity, a public transport system, access to drinking water and basic sanitation, as well as an inclusive financial system. Inequities in these conditions between affluent and poorer members of the population, and those residing in rural areas, influence health outcomes *(24)* and affected COVID-19 transmission risks. For example, during periods of movement restriction, the lack of decent housing, water supply and sanitation contributed to overcrowding and inadequate hygiene. The high rates of informal employment, with no financial or social support, caused people to look for any employment, using an inadequate transport system that increases transmission risks. A study measuring inequality in overall mortality among the extreme poverty quintiles of the provinces of Lima and Callao in 2020 found that families, relying on informal markets, were largely responsible for their own well-being *(25)*.

Studies also show an association between governance characteristics and COVID-19 testing and infection rates *(26)*. Highly centralized approaches to health system planning may limit responsiveness of services to local needs and priorities.

Participatory approaches occur through Local Health Administration Committees (CLAS), which operate through a non-profit civil association that is made up of community representatives. The objective of CLAS is to ensure that primary care facilities offer effective health services to people and the community through the efficient and transparent use of public funds and other resources obtained by CLAS. Participatory approaches are particularly important in the context of inequities between richer and poorer groups, which received different government benefits during the pandemic response *(27)*.

## Health infrastructure and planning

Integrated planning to address health problems implies that complex public health and health care delivery issues are articulated both within and beyond the health sector *(28)*. Considering the social determinants of health, multi-sectoral efforts are needed across various sectors and levels of government. Decentralized approaches are likely to enable governors to engage officials from all sectors to address public health issues and the social determinants for health priorities. However, there is a need to educate all stakeholders on the importance of coordinated work, as well as understanding that health problems aren't solved by health sector activities alone.

Governance processes were strengthened during the period under review as functions were delegated, such as food distribution to the most vulnerable populations (purchased by the municipalities) or the establishment of oxygen plants (contracted at the national level). Unfortunately, corruption in these processes meant that food baskets were incomplete or they were delivered late in some municipalities. There were also some challenges relating to critical infrastructure and insurance *(29,30)*.

In early 2020, the percentage of services at the primary level (Level 1) with inadequate infrastructure stood at 78%; at 51% for hospitals (Level II); and 60% for specialized institutes (Level III) *(31)*. Moreover, 80% of national and regional laboratories had inadequate infrastructure and equipment to deliver essential functions *(31)*.

## Human resources for health

The human resource gap represents a further challenge. By 2017, the country had 31.88 health professionals per 10 000 inhabitants (12.8 physicians, 14.1 nurses and 5.0 midwives). By 2019, this number increased to 34.6 health professionals per 10 000 inhabitants (13.6 physicians, 16.6 nurses and 6.6 midwives). With half of the regions above the standard density situated along the coast of Peru, health workforce maldistribution is also an issue *(32–34)*. Another issue relates to the high turnover of health professionals in rural areas, most of them working in postings as part of the Rural and Urban Marginal Health Service (SERUMS in Spanish).

According to the Observatory of Human Resources of the MoH, it is estimated that the gap in human resources for health reached 64 807 workers during the first wave of COVID-19, of which 9869 were specialist roles and 1526 were physicians *(35)*. This is as a result of historical deficits in human resources, added to by the loss of workers over 65 years of age or with some comorbidity due to COVID-19 prevention measures *(36)*. This affected the operations of hospitals and primary care facilities.

The contracting process for health personnel improved during the pandemic as part of the COVID-19 command structure. A group of health professionals were contracted with responsibility for rapid response and clinical follow-up teams, which later joined the comprehensive response team to diagnose and follow up symptomatic cases and their contacts *(37)*. However, the teams that were formed were insufficient to meet demand and to follow-up identified patients and contacts, according to national regulations.

The response of primary care facilities to meet the rapidly escalating demand from COVID-19 patients was also limited by structural inefficiencies and inadequate resources. Limitations in the supply of personal protective equipment (PPE) contributed to health workers' fears about contracting COVID-19, while shortages of oxygen between October 2020 and the first quarter of 2021 created further obstacles. Nonetheless, some health personnel continued face-to-face

work despite their teams moving to remote models, or continued with training and carrying out community work. Rapid task-shifting was implemented where workers were unable to practice their main profession (i.e., dentists).

## Information and communication technology

Prior to the COVID-19 pandemic, the implementation of tele-education activities was limited, both in academia and in the health sector. This is primarily due to poor Internet bandwidth nationwide. In the context of the pandemic, a critical issue was that the so-called infodemic and spread of misinformation *(38)*, which exceeded the information management capacity of the mass media and the national communication strategy.

Stakeholders reflected that there was an absence of an approved MoH communication plan, including educational messages about disease transmission, prevention and control measures (including rapid antibody and antigen tests), and treatments. This generated distrust among health personnel and the general population regarding public services and proposals for COVID-19 surveillance, prevention and control.

Digital applications were introduced to support response efforts, including an application developed to attend to patients virtually according to demand *(39, 40)*. Some barriers were identified with the application, however, such as limitations in linking it with prescriptions and medical records, and training requirements, especially for those at risk of COVID-19 due to their age and comorbidities. Teleconsultations with specialists were also implemented in some Level III hospitals for diagnosis, treatment and follow up of symptomatic patients as an alternative solution to face-to-face appointments. This required communication and follow up within the health system, with coordination managed via WhatsApp in some cases.

## Continuity of essential health services

During the pandemic, maternal and child health programme coverage decreased in prenatal care, immunizations, child growth and development control (CRED) and prevention of anaemia. Maternal mortality significantly increased in 2020, by 42.4% compared to 2019 *(41)*.

For patients with chronic noncommunicable diseases (hypertension and Type 2 diabetes), hospitals and national institutes distributed prescriptions through primary care facilities closer to the patient's address so that they or a family member could collect the necessary drugs. Although this initiative was implemented in all regions, its scope was limited. Excess deaths were also recorded in the 2019–2020 period.

Public health measures introduced to avoid rapid contagion among the population enabled progressive adaptation of response efforts involving

nonpharmaceutical interventions *(42, 43)*. However, closing primary care facilities at the start of the pandemic reduced health care continuity. Moreover, due to managerial and corruption issues, at the time that the pandemic began in 2020, 4854 general hospital beds and 464 intensive care unit (ICU) beds were impacted by a legal or arbitration dispute and were not able to be used in the response *(44, 45)*. When PHC facilities re-opened in mid-April 2020, therefore, there was an increase in the number of patients seeking preventive or curative treatment, despite ongoing fears of COVID-19 infection among both patients and health workers. As another main barrier to health care access stems from the lack of an integrated health system, coordinating processes among the IAFAS, and introducing clear administrative processes to facilitate health care referrals are likely to improve service delivery in future pandemic situations.

Efforts to improve health care coordinated were implemented, such as the Arriving to You drug delivery system for chronic patients (SIENMECRO, in Spanish), created through Health Directive N° 111-MINSA-2020-DGOS *(46)*. Other initiatives were introduced to strengthen PHC facilities through international cooperation – examples include the WHO/Pan American Health Organization (PAHO) project in Ancash, programmes in DIRIS North Lima and San Martin Region operated by the United States Agency for International Development (USAID), and activities of the nongovernmental organization (NGO) *Acción Contra el Hambre* with a focus on strengthening community empowerment and participation. The private sector provided medical supplies and oxygen plants and participated in the COVID-19 vaccination campaign.

## How multisectoral policy and action are supporting COVID-19 responses

In August 2020, Peru issued its National Multisectoral Health Policy to 2030, under the title "Peru, Healthy Country" to recognize the importance of working multisectorally to address the social determinants of health *(47)*. This is supported by other policy documents related to social determinants of health *(48–51)*. The National Multisectoral Health Policy establishes the care and health care that individuals, families and communities must receive throughout their lives. It also refers to prioritized interventions on social determinants of health, based on a comprehensive care by life course approach, the principles of health law and equity, PHC, territorial management, Peru's Gender Equality Policy *(52)*, the Sectoral Policy for Intercultural Health *(53)* and the National Policy for Disaster Management *(54)*. The National Multisectoral Health Policy corresponds with the agenda of the SDGs to 2030, especially with regard to SDG 3 on health and well-being, which recognizes that "good health is essential for sustainable development" *(55)*.

Multiple determinants of health affected how the population experienced the pandemic. Almost half of all workers in Peru are employed informally and many activities require face-to-face work *(56)*. In January–March 2020, only 35.6% of the population had a desktop or laptop computer (43.9% in urban areas and only

7.5% in rural areas). Regarding Internet access, 40.1% of households nationwide had access during the same period (62.9% in the Lima metropolitan area, 40.5% in other urban areas and only 5.9% in rural areas) *(24, 57)*.

Those who carried out essential activities during the pandemic in 2020 and 2021 experienced massive challenges due to impacts of movement restriction policies on the country's transport system *(58)*. In 2020, the employed population decreased in almost all economic activities. In mining, it contracted by 28.7% (n=55 700 employees), in services by 25.9% (n=1 798 500), in fishing by 21.4% (n=20 300), in commerce by 19.4% (n=633 400), in manufacturing by 16.8% (n=255 700) and in construction by 11.1% (n=117 500). However, in agriculture the employed population increased by 16.0% (n=649 800). Of the country's total employed population, 34.5% is concentrated in the services sector, 33.0% in agriculture/fishing/mining, 17.7% in commerce, 8.5% in manufacturing and 6.3% in construction. In the final quarter of 2020, the shares of the employed population increased by 7.6% in agricultural activities, by 10.1% in the fishing sector and by 1.0% in construction; and it decreased by 15.6% in services, 6.3% in mining, 3.1% in manufacturing and 3.0% in commerce *(56)*.

In relation to food security, 49.9% of households whose head does not belong to the economically active population accessed soup kitchens (*comedores populares*) and/or mothers' clubs (*Club de Madres*) in October–December 2020 to ensure food for their families; others benefited from common pots (*ollas communes*) promoted by the Metropolitan Lima Municipality. The proportion of minors who attended educational institutions and received school breakfasts and lunches stood at 85.9% and 29.8%, respectively, during the same period. Only 18.8% of households with adolescents under 13 years of age were beneficiaries of the milk feeding programme. Furthermore, only 53.4% of households reported ownership of a refrigerator to preserve their food (urban: 65.4% and rural: 14.1%), which may explain why in urban environments people frequently go to markets and/or supermarkets to buy food *(24)*.

Regarding basic needs at home, 10.4% of households live in inadequate housing, and 6.3% of the population live in overcrowded conditions. National statistics show inequities in the provision of basic services: 95.3% of the population have access to electricity through the public network (urban: 99.0%, rural: 80.8%), 91.2% have access to drinking water (but only 57.5% have access 24 hours a day) and 81.5% have access to sanitation *(24)*.

COVID-19 response measures that restricted movement thus had enormous social impacts on the population. Activities in public and private workplaces were suspended and activities gradually moved towards tele/remote working. Only essential activities and services were maintained in health, the production and sale of pharmaceutical products, the production and provision of food, banking and financial services, water and electricity services, and telephone centres, among others. Traffic was restricted to basic activities only, such as for purchasing food, accessing medicine, and emergency transport to assist IPRESS and to provide health care to people with COVID-19 in hospitals. Border closures were introduced, and land, river and air transportation services were

suspended nationwide. Such restrictions on the personal and economic freedom of the population meant an abrupt decline or end to opportunities for income generation. Depending on the duration of the COVID-19 pandemic, this could translate into greater impacts in the medium term.

Limited state capacity to enable sufficient conditions for self-care during the pandemic in 2020 and 2021 therefore compounded inequities in access to social protection services and meant that families and communities, accessing informal markets, were largely responsible for their own well-being. Reflecting public concerns, during the final weeks of mobility restrictions and stay-at-home orders in Peru, a public debate arose on the risks of dying of hunger versus dying from COVID-19.

Although the National Multisectoral Health Policy to 2030 recognizes the need to address these multi-faceted challenges through multi-sector partnerships, multisectoral action has tended to focus on virtual coordination between the various sectors, with varying participation from the community. Efforts are likely to be needed to translate this policy intent to action.

## How communities are responding to COVID-19

Stakeholders reflected that community participation in the COVID-19 response tended to be more present in rural and marginal urban areas, along the Coast, Andean and Amazon basin than in other areas of Peru. Community participation also differed in urban neighbourhoods, on issues of social participation, health management and governance.

The issue of establishing stipends or incentives for community participation has been on the public agenda since the 1990s. However, various criteria have prevented this from becoming a reality. Initially, a policy was considered to give free health care (including treatment) in primary care facilities, but this became redundant once the health insurance scheme and UHC was promoted.

Various health care workers chose to work with NGOs on specific projects in their localities as part of the COVID-19 response, while others joined as facilitators in social programmes, such as the National Programme *Cuna Más – a home visiting programme to support young children.*. In both cases, health care workers received a stipend to carry out activities. Another example of community participation and empowerment is through the CLAS committees, which work to ensure that PHC facilities offer effective health services to the community, through the transparent use of public funds and other resources.

Stakeholders reflected that, to develop, support and maintain meaningful community participation at all levels of the health system, participation must be remunerated and evaluated with clear accountability relationships. There was a clear view among stakeholders that communities should be involved in discussions on the social determinants that affect them and how these can be addressed and resolved together. Exploring the value of spaces that are

deliberative, such as the Assembly of APROMSAS (Asociación de Promotoras de Salud, or Community Health Workers Association), the Board of Irrigators, the Board of Producers, and the Roundtable for the Fight against Poverty, working through provincial networks, might be instructive.

Pre-pandemic, MINSA played a role in supporting community health interventions for the promotion, prevention and control of health risks in public educational institutions, addressing issues such as hygiene (hand washing, personal hygiene, tooth brushing), healthy eating, well-being (physical and mental health), disease prevention (vaccines, anemia, respiratory diseases, eye health, skin protection) and road safety. However, these initiatives were put aside in 2020 and 2021 to redirect efforts to other response activities. Private sector resistance to including self-care in public and private health insurance plans from the primary level upwards has hampered health promotion efforts in the past *(59, 60)*.

The lack of a coordinated, strategic communication plan to promote joint work with the community was noted by stakeholders as an important gap. Despite this, various initiatives promoted by NGOs and local authorities worked with community networks who were trained to support the identification and referral of COVID-19 patients for diagnosis and treatment in health facilities. Many of these initiatives developed into the so-called Community Anti-COVID-19 Committees *(61)*, which later became Community Health Committees.

## Conclusion and lessons learned

The COVID-19 pandemic was accompanied by major social and economic disruptions. Against a backdrop of declines in health service coverage due to impaired health care access, this case study highlighted the need to improve the organization, integration and interrelationships between different levels of care, and the different subsystems of the health sector, to coordinate planning and resources. A comprehensive referral model across the different health subsystems would help to improve the continuity and comprehensiveness of patient care from Level I onwards, including emergency care, hospital-based care and outpatient care, as well as laboratory testing and imaging. Effective monitoring of emergencies and their impact on other services could also be strengthened through better health information systems. This is likely to require rigorous standardization across different fields and appropriate training for health personnel on data collection.

During the pandemic response, remote care models made it possible to schedule appointments so that patients attend their consultations in a timely manner, and it has also made it possible to promote teleconsultations/tele-referrals between primary care facilities and Level II and III hospitals.

Overall, however, the pandemic has revealed major structural challenges in a health system marked by fragility and fragmentation. Leadership, governance and management challenges limit the effectiveness of the state to meet the health needs of the population. Sustained political commitment is needed to address health inequities and improve trust in government services. In particular, multisectoral efforts are critical for improving essential services and focusing efforts on the social determinants of health (e.g., housing, water, sanitation, electricity, Internet and mobile phone coverage).

Despite the gaps identified, the pandemic experience also highlighted the various efforts of partners and collaborators from the central level to the operational level who promoted public health interventions, comprehensive planning for PHC, information systems, training, and task-shifting among health personnel to improve health services and continuity of care. Improving engagement with civil society to promote active community participation will be especially important to strengthen the country's health system and provide a foundation for future pandemic responses.

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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization. In 2015, the Alliance commissioned the Primary Health Care Systems (PRIMASYS) case studies in twenty low- and middle-income countries (LMICs) across WHO regions. This case study builds on and expands these previous studies in the context of the COVID-19 pandemic, applying the Astana PHC framework considering integrated health services, multisectoral policy and action and people and communities. This case study aims to advance the science and lay a groundwork for improved policy efforts to advance primary health care in LMICs.