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HEALTH SECTOR FRAMEWORK DOCUMENT

SOCIAL SECTOR

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CONTENTS

EXECUTIVE SUMMARY.....	1
I. THE HEALTH SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF CURRENT REGULATIONS, THE INSTITUTIONAL STRATEGY, AND INTERNATIONAL AGREEMENTS ...	3
II. KEY CHALLENGES FOR THE HEALTH SECTOR IN THE REGION	6
A. The disease burden	6
B. Fiscal and financial sustainability	12
C. Healthcare services.....	16
III. EVIDENCE ON THE EFFECTIVENESS OF HEALTH POLICIES AND PROGRAMS.....	20
A. Multisector action	20
1. Working with other social services	21
2. Working with housing and urban development, infrastructure, and environment	23
B. Improving healthcare services: effectiveness, efficiency, and quality	24
1. People-centered healthcare	24
2. Healthcare financing	26
3. Healthcare service delivery	29
4. Human resources	33
5. Medical supplies, diagnostics, equipment, and pharmaceuticals	35
6. Digital health.....	37
7. Governance	38
8. Information and knowledge gaps.....	40
IV. LESSONS LEARNED FROM THE IDB GROUP'S EXPERIENCE IN HEALTH.....	42
V. LINES OF ACTION FOR THE IDB GROUP's WORK IN HEALTH	48
ANNEX I Figures	
ANNEX II Tables	
ANNEX III Operations Included in the Sample and Document Review for the Section on Lessons Learned	
BIBLIOGRAPHIC REFERENCES	

ABBREVIATIONS	
BMI	Body Mass Index
CDC	Centers for Disease Control and Prevention
CDT	<i>Centros de Diagnóstico y Tratamiento</i>
COMISCA	Council of Ministers of Health of Central America and the Dominican Republic
CRS	<i>Centros de Referencia de Salud</i>
DALYs	Disability Adjusted Life Years
DRG	Diagnosis Related Group
ECDC	European Center for Disease Control and Prevention
ECLAC	Economic Commission for Latin America and the Caribbean
EDRM	Emergency and Disaster Risk Management
EHR	Electronic Health Records
FAO	Food and Agriculture Organization
GBD	Global Burden of Disease
GDP	Gross Domestic Product
HIV	Human Immunodeficiency Viruses
HTA	Health Technology Assessments
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IHR	International Health Regulations
IHSN	Integrated Health Service Delivery Networks
IMF	International Monetary Fund
KIC/KLD	Knowledge and Learning Division
LAC	Latin America and the Caribbean
LTC	Long Term Care
MHI	Mesoamerican Health Initiative
MNCH	Maternal, Newborn and Child Health
NCDs	Non-communicable Diseases
OECD	Organization for Economic Co-operation and Development
OECS	Organization of Eastern Caribbean States
OOP	Out-of-Pocket
PAHO	Pan-American Health Organization
PHC	Primary Health Care
PPPs	Public-Private Partnerships
RMEI	Regional Malaria Elimination Initiative
SARS	Severe Acute Respiratory Syndrome
SDG	Sustainable Development Goals
SFD	Sector Framework Document
SUS	<i>SUS- Sistema Único de Saúde</i>
UHC	Universal Health Coverage
UN	United Nations
UNICEF	United Nations Children's Fund
WHO	World Health Organization

EXECUTIVE SUMMARY

Health is essential to individuals, societies, and their economies. People value health as an end in itself but health also contributes to economic growth, to individual economic productivity, and to the effectiveness of other human capital investments like education. The COVID-19 pandemic has dramatically demonstrated the importance of protecting population health: regional Gross Domestic Product (GDP) is expected to fall by 6.9% in 2020.

Internationally, health has been recognized as an essential part of development through a long series of United Nations and World Health Organization (WHO) agreements and declarations. Governments have recognized the importance of health by making it the third Sustainable Development Goal (SDG) and by endorsing the principle of Universal Health Coverage in the General Assembly in 2019.

This Sector Framework Document (SFD) addresses the actions that make progress toward Universal Health Coverage (UHC) possible. Universal Health Coverage is the commitment to assure that all people have access to good quality health services they need, when and where they need them, and without financial hardship. Progress toward UHC involves increasing: (i) the share of people with healthcare service access, prioritizing those with least access; (ii) the share of services to which they have access; and (iii) the extent to which they are protected from the financial costs of healthcare (WHO, 2010a). Nevertheless, healthcare supply and demand are constantly changing and, therefore, UHC is not a characteristic which country achieve; rather, it is a dynamic and aspirational goal toward which they progress.

Progress toward UHC will require addressing three long-standing challenges in the region: (i) a burden of disease dominated by noncommunicable illnesses; (ii) difficulties with financial and fiscal sustainability of health spending; and (iii) healthcare services with low productivity and poor quality.

The first challenge is that Latin American and Caribbean (LAC) countries have to confront a triple burden of disease. Noncommunicable diseases represent the largest share of death and disease, yet high rates of infectious disease, maternal and neonatal conditions, and injuries persist. These health risks disproportionately affect lower income groups. While healthcare services can prevent some of these risks, many of them are better addressed through policies such as taxes on tobacco, regulation of air pollution, or safer road designs.

Financial and fiscal sustainability is a second challenge. To progress toward UHC, LAC countries will have to spend more on health and spend it more efficiently and more equitably. Yet they face serious fiscal constraints, exacerbated by the COVID-19 pandemic. Reforms to allocate funds to cost-effective services, to create incentives for quality, and to address differential access due to income, are all needed to assure that any increases in spending make a positive impact on healthcare services and health outcomes of the population.

Health financing reforms that reduce fragmentation, expand risk pooling, and improve financial management are also needed to limit health budget cost pressures, but also to reduce other economic distortions. For example, countries in which contributory social insurance coexists with health schemes funded though general revenues give firms and employees a financial incentive to remain outside the formal sector. Furthermore, during an economic crisis, social insurance linked to employment status limits the number of people with coverage, leads to discontinuity in healthcare when people lose their jobs, and puts demand

pressure on the general-revenue funded healthcare services at a time when revenues are declining.

The third challenge facing LAC countries is the low productivity and poor quality of healthcare services, which undermines universality by excluding or poorly serving lower income and other disadvantaged groups. Most of these problems have less to do with insufficient resources than with institutions which systematically underutilize existing resources, fail to provide continuity of care, tolerate too much waste and corruption, and tend to be too inflexible to support the kinds of continuous quality improvement required by modern healthcare.

The region now faces the consequences of two major crises—the COVID-19 pandemic and climate change—whose effects are detrimental to population health. Contributing to the region's aspirations for UHC requires strategies that acknowledge and address these three long-standing challenges along with the stresses of these two unprecedented crises.

The triple burden of disease requires population health initiatives, multi-sector action, and improved healthcare quality. If population risk factors are left unaddressed, no healthcare system will have the capacity to treat or manage diseases of the future. Furthermore, without investments in emergency preparedness and prevention, healthcare systems will continue to be stressed by avoidable conditions and epidemics. By reducing population health risks, countries can improve population health which reduces demand for healthcare services and improves the fiscal and financial sustainability of healthcare systems. The IDB Group will support countries in researching, designing, and implementing such policies.

Fiscal and financial sustainability will require political commitments to increase resources for healthcare services, with special emphasis on reaching poorer and less advantaged groups. But to slow the pace of spending growth, political resolve will also be necessary to improve the efficiency of that spending. The IDB Group will support countries seeking to reduce health system fragmentation with comprehensive reforms. In other countries, it will help establish conditions for future reforms through such activities as standardizing information systems, payment mechanisms, and service coding; integrating service delivery networks; and promoting quality improvement, health technology assessment, and private contracting.

Finally, improving the quality of healthcare service delivery, particularly for lower income, marginal, and disadvantaged groups, is an essential part of progress toward UHC. It requires both a shift toward people-centered healthcare and better integration of healthcare service delivery. The IDB Group will support countries in improving the inclusiveness of healthcare services and developing integrated healthcare service delivery. This includes reducing social, and cultural barriers to healthcare; reducing income differentials in healthcare access; and addressing the distribution of services between healthcare levels; referral systems; supply and logistics management; digital health, information systems; and expansions of infrastructure, including improvements in facility maintenance and management.

However, this transformation of healthcare service delivery will not happen in pieces. It requires systemic change and therefore governance reforms will be necessary to promote: (i) appropriate linkages between Primary Health Care (PHC) and other healthcare services; (ii) financial management systems that allocate resources based on need and cost-effectiveness, while providing positive incentives for staff and management; and (iii) systemic interventions that are people-centered, focus on service quality, and establish work cultures that reward performance measurement, analysis, adaptation, and improvement.

I. THE HEALTH SECTOR FRAMEWORK DOCUMENT IN THE CONTEXT OF CURRENT REGULATIONS, THE INSTITUTIONAL STRATEGY, AND INTERNATIONAL AGREEMENTS

- 1.1 **The Health Sector Framework Document guides the IDB Group's operational, policy dialogue, and knowledge generation activities with countries and governments regarding health.** Consistent with document “Strategies, Policies, Sector Frameworks, and Guidelines at the IDB” (GN-2670-5), this document replaces the Health and Nutrition Sector Framework Document (GN-2735-7). This Sector Framework Document (SFD) contributes to addressing two of the three development challenges of the Institutional Strategy (social inclusion and equality; productivity and innovation) and aims to further strengthen the IDB Group’s work in health with emphasis on (i) promoting technology adoption and innovation; and (ii) mainstreaming cross-cutting issues: gender equality and diversity, climate change and environmental sustainability, and institutional capacity and the rule of law. This SFD is also in keeping with the Bank’s five sector strategies, particularly the Strategy on Social Policy for Equity and Productivity (GN-2588-4). It is aligned with the Strategic Selectivity Framework for the 2021-2022 Programming Cycle (GN-3017), in particular with the macro fiscal stability component which emphasizes the improvement of expenditure allocation and efficiency.
- 1.2 **Health is essential to individuals, societies, and the economies.** First, people value health as an end in itself: studies in Latin American and the Caribbean (LAC) and elsewhere have shown that health is among the top three factors contributing to people’s life satisfaction (Graham, 2008; IDB, 2008). Second, health contributes to aggregate economic growth (Bloom et al., 2018; Jamison et al., 2013; Rosendo Silva et al., 2018; Weil, 2014). The converse is also true: poor health can be economically disastrous. Because of the COVID-19 pandemic, the World Bank estimates that regional Gross Domestic Product (GDP) in LAC fell by 6.9% in 2020.¹ Third, health raises returns on other human capital investments such as early childhood development, formal education, job training, and cash transfer programs (Plaut et al., 2017). Fourth, improving population health can improve fiscal sustainability. For example, smoking related diseases in 12 Latin American countries generate medical costs of US\$26.9 billion annually, accounting for 6.9% of public health spending—a sum that could be reduced through cost-effective tobacco control measures that would save funds that could prevent or treat other forms of illness (Goodchild et al., 2018; Pichon-Riviere et al., 2020). Finally, people want good quality healthcare services. In surveys, between one-third and one-half of respondents in the region report dissatisfaction with the quality of healthcare available to them, and more than three-quarters believe that many people in their country cannot afford adequate healthcare services (IPSOS Global Advisor, 2018). Governments have explicitly recognized the importance of health by approving “health and wellbeing” as the third Sustainable Development Goal (SDG), and recognizing that health contributes to achieving many other SDGs, including Education (Goal 4); gender equality and women’s empowerment (Goal 5); growth and productive employment (Goal 8); and promoting peaceful and inclusive societies (Goal 16).

¹ World Bank, Global Economic Prospects, January 2021.

- 1.3 **This SFD addresses the actions that make progress toward Universal Health Coverage (UHC) possible.** Universal Health Coverage is the commitment to assure that all people have access to good quality health services they need, when and where they need them, and without financial hardship. This definition was endorsed by Inter-American Development Bank (IDB) member countries in the United Nations (UN) Declaration adopted by the General Assembly on September 23, 2019.² Thus, we can measure progress toward UHC in terms of: (i) the share of people with access to healthcare services with adequate quality; (ii) the share of services to which they have access; and (iii) the extent to which they are protected from the financial costs associated with healthcare (WHO, 2010a). Universality in the context of LAC countries requires redressing long-standing inequitable access to quality healthcare services. Furthermore, healthcare supply and demand are constantly changing and, therefore, UHC is not a characteristic which countries achieve; instead, it is a dynamic and aspirational goal toward which they progress.
- 1.4 **Progress toward UHC is affected by linkages between health and other sectors.** Given the extensive interconnections between health and other facets of life, this SFD is complemented by most of the IDB Group's 22 SFDs. The Skills Development SFD (GN-3012-3) documents the impact of health on student learning, skill acquisition, and cognitive development; and the Early Childhood Development SFD (GN-2966-2) describes health policy interventions that contribute to early childhood development and the benefits of coordination between health and early childhood development (ECD) services in terms of screening, early detection, and timely treatment of developmental delays. Health is considered a key element of the Social Protection and Poverty SFD (GN-2784-7): (i) health is improved by successful conditional cash transfer programs; and (ii) it improves the welfare of families living in poverty through services related to sexual and reproductive health and management of chronic diseases in adults. The Gender and Diversity SFD (GN-2800-8) addresses health issues that relate to adolescent pregnancy; inequities in access to sexual and reproductive health services; obstacles faced by indigenous groups to access or obtain culturally-appropriate healthcare; discrimination faced by Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) individuals; and the co-responsibility of men in caring for children, in sexual and reproductive health, and in prevention of violence against women. Health is linked to the Labor SFD (GN-2741-7) in two important ways: through recognizing how health affects labor force participation and earnings; and how financing healthcare services through contributions to social insurance can create incentives that discourage formal employment and lower productivity, typically rationing better quality care through employment status. The Water and Sanitation SFD (GN-2781-8) addresses a significant risk factor for ill health related to water-borne vectors for infectious disease. The Transportation SFD (GN-2740-12) discusses the role of infrastructure in promoting access to healthcare services and the harms to health caused by air pollution from fossil fuels used in transport. The Housing and Urban Development SFD (GN-2732-11) seeks to create inclusive cities with explicit attention to

² The UN Declaration states that "... universal health coverage implies that all people have access, without discrimination, to nationally determined sets of the needed promotive, preventive, curative, rehabilitative and palliative essential health services, and essential, safe, affordable, effective and quality medicines and vaccines, while ensuring that the use of these services does not expose the users to financial hardship, with a special emphasis on the poor, vulnerable and marginalized segments of the population."

health-related factors like open space, clean air, and good quality housing. Health is also discussed prominently in the Environmental and Social Policy Framework (ESPF) as both a contribution to and outcome of well-designed interventions that incorporate the concerns of diverse populations equitably.

- 1.5 **Progress toward UHC is also affected by linkages between health, governance, and the environment.** This Health SFD links to the Decentralization and Subnational Governments SFD (GN-2813-8) which addresses the role of local governments in health service investments, community health programs, and improving transparency and accountability in management of public services; and the Transparency and Integrity SFD (GN-2981-2) which discusses bribes paid in the health sector and the adverse impact of corruption on population health. The Food Security SFD (GN-2825-8) has direct links to health, establishing lines of action to address all forms of malnutrition: micronutrient deficits, malnutrition, and obesity, while one of the four challenges in the Agriculture SFD (GN-2709-10) focuses on the provision of healthy diets. The lines of action in the Innovation, Science and Technology SFD (GN-2791-8) are important to health for innovations in preventing and treating disease, and due to the potential benefits of digital health. The Fiscal Policy and Management SFD (GN-2831-8) discusses health in terms of its impact on financial sustainability and the need to improve public spending efficiency; however, it also recognizes that fiscal policy can promote health by taxing carbon (which reduces air pollution), alcohol, tobacco, fast foods and sweetened beverages. Finally, the Climate Change SFD (GN-2835-8) documents how climate change and extreme weather events will worsen population health through increasing prevalence of water- and vector-borne tropical disease, increase respiratory diseases due to deficient air quality, and increase malnutrition due to drought. It explains this will disproportionately affect lower-income countries and lower-income populations; and that improving local health systems is part of an adaptation strategy.
- 1.6 **Progress toward UHC depends on how countries respond to long-term trends and immediate crises.** Countries that have progressed farthest toward UHC, primarily those of Western Europe, North America, and Eastern Asia, achieved their biggest gains after World War II during an era of rapid economic growth, when their populations were demographically younger, and when the availability of medical treatments for noncommunicable diseases were relatively limited. To progress toward UHC today, countries in the region are facing three significant challenges: a burden of disease dominated by noncommunicable illnesses, difficulties with financial and fiscal sustainability of health spending; and healthcare services with low productivity and poor quality. In addition, the region now faces the consequences of two major crises: the Covid-19 pandemic and climate change.
- 1.7 **The rest of the document is organized as follows.** Section II describes the state of health in the region and discusses three long-standing challenges. Section III reviews the evidence regarding the effectiveness of policies and programs—first addressing actions that can be taken outside the health sector, followed by a more detailed analysis of health sector policies, programs, and interventions. Section IV discusses lessons learned from the IDB Group's experiences, and Section V proposes a set of strategic lines of action to guide the IDB Group's operational, analytical, and dialogue activities in health.

II. KEY CHALLENGES FOR THE HEALTH SECTOR IN THE REGION

- 2.1 **Progress toward Universal Health Coverage will require confronting three major challenges.** UHC is a measurable goal related to the assurance that all people have access to good quality health services they need, when and where they need them, and without financial hardship.³ The region has achieved important progress toward UHC, but expectations for healthcare services continue to rise and many older problems have not been resolved. To make progress, countries will have to address three long-standing challenges: (i) a burden of disease dominated by noncommunicable illnesses which are increasingly difficult and costly to treat; (ii) difficulties with financial and fiscal sustainability of health spending; and (iii) healthcare services with low productivity and poor quality. This section looks at each of these three challenges in turn.
- A. **The disease burden**
- 2.2 **LAC has experienced major improvements in health over the last 50 years.** Life expectancy at birth has increased from 60 years to over 75 years between 1970 and today. Women have a life expectancy of 78 years, compared to 72 years for men (see [Figure 40](#), [Figure 41](#), and [Figure 42](#)). The crude death rate has fallen from about 13 per 1,000 people to just 6 per 1,000 people over the same period. Much of this is due to declines in child mortality which fell from 118 per 1,000 live births in 1970 to an estimated 16 per 1,000 live births in 2018—faster than would be expected on the basis of national income growth alone or general worldwide improvements (Berlinski & Schady, 2016).
- 2.3 **Today, LAC has a triple burden of disease.** The first of these burdens—*infectious disease along with Maternal, Newborn and Child Health (MNCH) conditions*—has diminished considerably in the last 25 years, though significant inequities persist and much of it is preventable. The second of these burdens is from Non-Communicable Diseases (NCDs) which represent the largest share and include conditions, like diabetes, which are increasing. The third of these burdens is from physical injuries which have remained persistently high, including homicides, suicides, and traffic accidents (see [Figure 8](#) and [Figure 9](#)).
- 2.4 **The first burden of disease category is associated with communicable diseases, MNCH, and nutritional conditions and remains significant in LAC.** These causes of death accounted for about 158 deaths per 100,000 population in 1990, falling to 74 per 100,000 in 2019—a decline of more than 50%. Many of these deaths are easily preventable but occur when healthcare services are of poor quality, when people fail to seek healthcare in a timely fashion, or when public health functions tasked with detecting and preventing epidemics are neglected.

³ These three features of UHC are measurable; however, the complexity of healthcare services, uncertainties in health service needs, and difficulties in collecting reliable data on all three dimensions make it hard to monitor or assess on a regular basis. WHO and the World Bank monitor UHC with a service coverage index and a financial protection index (WHO/World Bank, 2017). The Global Burden of Disease Project has proposed an alternative index based on intervention coverage or outcome-based measures such as mortality-to-incidence ratios (Lozano et al., 2020).

- 2.5 **Progress against communicable diseases requires sustained effort.** The region has made considerable progress against vaccine-preventable diseases like diphtheria, measles, and tuberculosis; smallpox and polio have even been eradicated from the hemisphere (Costa et al., 2018; WHO, 2019).⁴ Progress against malaria is also being made in most countries, but it remains more common in areas with disadvantaged populations in Brazil, Venezuela, Ecuador, Mexico, and Peru (Franco-Herrera et al., 2018). Where immunization efforts have lagged, older diseases have reappeared, such as measles outbreaks in Venezuela (2018), Brazil (2019), and Mexico (2020).⁵ The recent surge in migration from Venezuela has also been associated with outbreaks of vaccine-preventable and sexually transmitted diseases in receiving countries (Ibanez & Rozo, 2020; Tuite et al., 2018) (see [Box 1](#)).
- 2.6 **New communicable diseases are more frequent.** Since 2000, drug-resistant strains of malaria and tuberculosis have appeared; and previously unknown diseases have emerged including SARS (2002), H1N1 (2009), MERS (2012), Zika (2015), and COVID-19 (2019). This is likely to continue due, in part, to environmental degradation and climate change which increase human exposure to zoonotic diseases and air pollution. Thus, the emergence of a pandemic with a rate of transmissibility and mortality like COVID-19 was not unexpected (Bennett & Carney, 2015; Fan et al., 2018; Jain et al., 2018; Mills et al., 2004; Ross et al., 2015). COVID-19 has affected LAC more than most other regions according to official figures which underestimate the true impact of the pandemic. For example, in 2020, Mexico reported 125,087 deaths from COVID-19, but analysis of excess mortality (i.e., the difference between total deaths during the pandemic and historical averages) suggests the pandemic has directly or indirectly contributed to a total of 184,687 deaths (see [Figure 66](#)). Peru reported 37,680 confirmed deaths from COVID-19 but analysis shows excess deaths of 102,267 (see [Figure 67](#)) (Ibanez et al., n.d.).⁶ Thus, communicable diseases will remain part of the overall disease burden in the region, requiring continued vigilance and public policy attention.

⁴ Also, World Development Indicators, 2020.

⁵ https://www.who.int/immunization/monitoring_surveillance/burden/vpd/surveillance_type/active/measles_monthlydata/en/ accessed July 3, 2020.

⁶ <https://www.nytimes.com/interactive/2020/04/21/world/coronavirus-missing-deaths.html>, accessed January 3, 2021, shows similar figures (*The New York Times*).

Box 1. Migration and Health⁷

The migrant population has been growing at unprecedented rates in Latin America and the Caribbean (LAC) in recent years. Forced migrants are vulnerable for various reasons. They are likely to live in precarious conditions, have unstable jobs, and take long journeys in which they are exposed to food insecurity, lack of shelter, and the risk of human trafficking. Many of them leave their countries of origin with pre-existing health conditions and lack of vaccination, which together with the hazards they face on the road, contribute to a deteriorated health status upon their arrival to destination countries. This is aggravated by disparities in their access to healthcare services. In the context of the Covid-19 pandemic, migrants are less able to isolate, have greater risk of exposure, and less access to water and sanitation than the native population.

Migrant health patterns depend on the kind of migration

Economic migrants are often healthier relative to others in their country of origin (Jasso et al., 2004).⁸ However, the opposite is likely for those fleeing the collapse of their countries due to economic collapse, armed conflicts, or persecution. Upon arrival, the health of forced migrants is often worse than the host population and relative to non-forced migrants. Unlike economic migrants, for whom there is evidence of convergence in disparities relative to the native population, refugees' health disadvantage seems to persist over time (Giuntella et al., 2018).

Sources of disparities in migrants' access to and use of healthcare services

In most countries, the legal status of immigrants determines the type of access to healthcare services they have. Migrants in Argentina, for example, have access—regardless of their migratory status—to the public healthcare system (Hadler, 2015). In Colombia, all Venezuelan migrants have free access to emergency and preventive health services, independent of their migratory status, however, full access to the healthcare system is restricted to migrants with a legal status (Ibanez & Rozo, 2020).

Discrimination can affect migrant health in two ways: it can induce physiological and psychological effects on a person's health; and it can affect the kind of treatment received by health professionals (Balsa & McGuire, 2003; Johnston & Lordan, 2012). For example, 1 in 4 Venezuelan migrants feel that the attention they were given when seeking medical services in Peru was not the same as the attention given to a Peruvian national.⁹ Linguistic and cultural differences can also act as barriers for immigrants in accessing high-quality healthcare services (Escarce & Kapur, 2006; Flores, 2005). Immigrants may not attend health centers due to lack of information about their rights or due to fear of being deported, one of the reasons given by Venezuelan migrants in Colombia and Peru for not seeking medical services (Ibanez & Rozo, 2020).

2.7 Child and infant mortality have fallen but remain higher among lower income groups. Child mortality has declined by more than half since 1990, from 54 deaths per 1,000 live births to 16 in 2018. While the under-five mortality rate in Chile was 6 per 1,000 live births, close to the rates in high-income countries, the rate in Bolivia was 22.¹⁰ Within countries, child mortality is highest among the poorest quintile of households, three times higher than the richest quintile in Guatemala and Peru and twice as high in Guyana (Sanhueza et al., 2020) (see [Figure 54](#)). Infant and neonatal mortality have followed a similar pattern of dramatic improvements with continuing inequities (Maceira, 2016; Sanhueza et al., 2020) (see [Figure 53](#) and [Figure 55](#)). Rural areas tend to have higher child and infant mortality rates, too (Barros et al., 2020) (see [Figure 61](#) and [Figure 62](#)).

2.8 Maternal mortality has declined 50% since 1990, but rates remain high in Haiti with 529 deaths per 100,000 live births, the Bahamas (114), Barbados (114), Guatemala (108), and Bolivia (160) (PAHO, 2019). A study in Guyana, Honduras and Panama found the highest maternal mortality rates among indigenous populations; and for Brazilian women identified as black, maternal mortality rates

⁷ Based on a text provided by Migration Unit (SCL/MIG).

⁸ Economic migrants are the people who choose to move to another country to improve their lives by finding work, or due to other motives such as education or family reunification (UNHCR, 2016).

⁹ Preliminary results from an IDB study.

¹⁰ World Development Indicators, accessed July 3, 2020.

were 44.5 per 100,000 live births compared to 23.4 for the rest of the population (Castro et al., 2015) (see [Figure 45](#) and [Figure 46](#)).¹¹ Adolescents are at greater risk for maternal mortality and, as of 2018, the region had 66.5 births for every 1,000 girls between the ages of 15 and 19—above the world average and highest among poorer households (see [Figure 52](#)). This causes a wide range of health, economic, and social risks for these young women (Siniša, 2018).

- 2.9 **The second group of diseases is large and growing: Non-communicable Diseases.** NCDs accounted for 60% of deaths in 1990, rising to 77% of deaths in 2019.¹² Today, the share of deaths related to NCDs is lowest in Haiti and Guatemala but still accounts for 60% of all deaths. In countries like Barbados, Uruguay, and Chile, the share of NCDs is close to 90% (see [Figure 1](#)). The main causes of death include cardiovascular disease, neoplasms (cancers), diabetes, neurological disorders, and digestive diseases (see [Table 1](#)).
- 2.10 **More people in the region are susceptible to NCDs because they are surviving to older ages** (Cafagna et al., 2019). The number of people in the region who are 65 years and older has nearly doubled since 1995, from 62 million to 116 million in 2019; from about 4% to almost 9% of the population (PAHO, 2019) (See [Figure 43](#)). In 2050, almost one-fifth of the region's population will be over 65 years old, rising to 25% in 2070 at which time LAC will be the second oldest region in the world after Europe (UN, 2019).
- 2.11 **Many health conditions affect an individual's quality of life—sometimes severely—without causing death.** Indicators like “Disability Adjusted Life Years” (DALYs) sum the years of life lost to premature mortality with the years that people live with impaired health due to a given disease.¹³ By considering morbidity in addition to mortality in this way, the burden from certain illnesses is much greater. Yet, five of the top six causes of DALYs are still chronic conditions: cardiovascular diseases, cancers, diabetes, musculoskeletal disorders, and mental disorders (See [Table 1](#)). Self-harm and violence ranked fourth in contributing to the region's DALYs and will be discussed below. Depression and anxiety disorders cause over half the disease burden from mental health and substance abuse disorders, followed by bipolar disorder, schizophrenia, childhood and development disorders, alcohol and drug abuse. These mental disorders are increasingly significant yet the region's healthcare services have struggled to incorporate appropriate mental healthcare interventions into their systems of care (Caldas de Almeida, 2013; Kohn et al., 2018; W. Martinez et al., 2017). About 2% of children are estimated to have development disorders or disabilities but screening for conditions varies across countries both in terms of the health conditions examined and share of children who are screened (99% in Chile and Uruguay, 20% in Bolivia and Peru, and 1% in Guatemala and the Dominican Republic) (Therrell et al., 2015).

¹¹ For the age group from 20 to 24 years old.

¹² All figures on disease burden are from Institute of Health Metrics and Evaluation (IHME), Global Health Data Exchange (GHDx), accessed June 11, 2020 unless otherwise noted.

¹³ The Global Burden of Disease (GBD) study uses disability-adjusted life years (DALYs), which are the sum of years of life lost due to premature mortality (YLL) and years lived with disability (YLD). While in the GBD lexicon disability refers to any short-term or long-term health loss, other than death, as explained in the IDB's Diversity Action Plan, the IDB promotes the social model of disability recognized by the UN Convention on the Rights of People with Disabilities, which defines disability not as a medical condition but as the result of an interaction between people with impairments and the external barriers that limit their effective participation in society.

Unpredicted diseases, such as COVID 19, and catastrophic events driven by climate change threaten mental health by causing anxiety, depression, stress, anger and violence as well (Hayes et al., 2018; Wind et al., 2020).

- 2.12 **Addressing the risk factors that cause NCDs would have the largest impact on improving health and reducing health system demands.** The 5 leading risk factors for mortality and morbidity in the region are all associated with NCDs: high body-mass index (15%), high glucose levels (14%), high blood pressure (13%), smoking (10%), and unhealthy diet (10%), (See [Figure 22](#)). If the region could reduce smoking by 25%, it could prevent about 90,000 premature deaths annually, each of which represents about 10 years of lost life (Jha & Peto, 2014). Alcohol use and air pollution account for another 9% and 6% of mortality and morbidity, respectively. In fact, environmental pollution—considering contamination in the air, water, and soil together—accounts for 16% of the disease burden. Stronger controls on air pollution alone could avert about 23% of the 400,000 annual deaths in the region associated with ambient particulate contamination (Landrigan et al., 2018).
- 2.13 **Obesity is a growing challenge yet stunting persists.** The region has some of the world's highest rates of obesity alongside significant stunting due largely to unhealthy diets. About 29% of adults in the region are obese, ranging from 19% in Trinidad and Tobago and Peru to 29% in Mexico and 31% in Bahamas.¹⁴ The prevalence of overweight adolescents is 46% in Chile and 27% in Guatemala. Paraguay has the highest rate of children who are overweight, 12% of children under 5 years old, followed by Barbados and Trinidad and Tobago with 11% each.¹⁵ Despite substantial progress over the last 20 years (UNICEF/WHO/World Bank Group, 2019; UNICEF, 2019), one in ten children under the age of 5 still suffer from stunting which is particularly high in Guatemala (46%) and Ecuador (24%). It is two to five times higher among indigenous groups in Brazil than among non-indigenous groups; and children living in Peru's rural areas are three times as likely to be stunted as their urban peers (UNICEF, 2019) (see [Figure 65](#)). Differences across income remain large as well (see [Figure 47](#)). Poor diets can lead to undernourishment (including stunting) and, paradoxically, overweight in the same person over time or within a single family. The coexistence of undernourished children and overweight mothers in the same household has been documented in Bolivia, Guatemala, Guyana, Haiti, Honduras, Nicaragua and Peru (Popkin et al., 2020; Rivera et al., 2014; Shekar & Popkin, 2020). In the medium term, the COVID-19 pandemic is likely to exacerbate malnutrition of all kinds through impoverishment and mental stress.
- 2.14 **The third burden of diseases comes from the region's persistently high rate of violence and traffic accidents.** Self-harm and violence account for as many deaths in LAC as neurological disorders or respiratory illnesses and are a leading cause of mortality and morbidity among the young. Homicide rates (26 deaths per 100,000 people) are the same as in 1990 and are higher than any other region—three times higher than the second highest region (Central & Eastern Europe and Central Asia); and five times the average for Organization for

¹⁴ Obesity is defined as having a body-mass index (BMI) equal to or greater than 30. BMI is a person's weight in kilograms divided by his or her height in meter squared. Source: World Health Organization (WHO) Global Health Database accessed May 5, 2020. <http://apps.who.int/gho/data/view.main.REGION2480A?lang=en>

¹⁵ Global School-Based Student Health Survey, <https://www.cdc.gov/gshs/index.htm>.

Economic Co-operation and Development (OECD) countries (see [Figure 14](#)). The rate of suicide (7 per 100,000 people) is lower than other regions despite increasing slowly over the last three decades (see [Figure 15](#)) and it may rise in coming years as a result of the pandemic (Atkinson et al., 2020). The rate of transportation injuries has fallen by almost 1% annually, but at 19 deaths per 100,000 people, it is nearly twice the rate in high-income countries and above the global average (see [Figure 16](#)). The rates of death from intimate partner violence are higher than most other regions and twice the OECD average (see [Figure 17](#) and [Figure 18](#)). Of 25 countries in the world with the highest rates of femicide, 13 are borrowing member countries of the IDB (Geneva Declaration Secretariat, 2015). When looking at all causes of death, self-harm and interpersonal violence is the third or fourth highest cause in Belize, Colombia, El Salvador, Guyana, Trinidad and Tobago, and Venezuela after cardiovascular diseases and neoplasms (see [Table 3.1](#)).

- 2.15 **A person's income, gender, ethnicity, and residence strongly affect their risk of ill health.** The poor are more exposed to risk factors for ill health than those with high incomes (Di Cesare et al., 2013; Stevens et al., 2008). Women residing in high socioeconomic urban areas (i.e., 90th percentile in terms of the share of residents over 25 years old who have completed secondary education) live 10 years longer than those in areas at the 10th percentile in Panama City; with a difference of 8 years in life expectancy for men. Similar gaps ranging from 2 to 10 years have been documented in Santiago, Mexico City, Belo Horizonte, and Buenos Aires; however, in San José, Costa Rica, the difference is less than one year (Bilal et al., 2019). Disparities by region and socioeconomic status are also related to racial and ethnic inequities in health. For example, in 2008, life expectancy among Brazil's Afro-descendant population was six years less than for the white population (Paixão et al., 2010). Furthermore, the probability of dying before age five—related to a combination of neonatal conditions, infectious diseases and NCDs—is more than two times higher in the poorest 20% of households than in the wealthiest 20% (Sanhueza et al., 2020).
- 2.16 **Environmental conditions are critical to health and are worsening with climate change.** Population health, especially among poorer households, is at risk from all forms of pollution—in the air, soil, and water. Indoor and outdoor air pollution account for 5% of the avoidable mortality and morbidity in the region, (Campbell-Lendrum & Prüss-Ustün, 2019). Water pollution carries infectious agents that cause gastrointestinal diseases and toxic chemicals which lead to neurological problems, particularly in children (Landrigan et al., 2019). Long-term exposure to air pollution debilitates people enough to increase their risk of death from COVID-19 (X. Wu et al., 2020). People living in informal urban settlements are exposed to environmental health risks of all kinds which, in combination with other aspects of the social and built environment, leads to higher burdens of disease (Corburn & Sverdlik, 2018). Climate change is also exacerbating health risks. Sudden increases in temperatures can lead to heat stroke, dehydration, and death (Moda et al., 2019). Warmer temperatures increase transmission of vector-borne diseases (Campbell-Lendrum et al., 2015). Droughts reduce quality and quantity of food production, contributing to malnutrition (FAO IFAD UNICEF, 2018).

2.17 **The triple burden of disease requires population health initiatives, multi-sector action, and improvements in healthcare service quality.** If population risk factors are left unaddressed, no healthcare system will have the capacity to treat or manage diseases of the future. The social determinants of health simply cannot be ignored. Furthermore, without investments in emergency preparedness and prevention, healthcare systems will continue to be stressed by avoidable conditions and epidemics. By reducing population health risks, countries can improve population health which reduces demand for healthcare services and improves the fiscal and financial sustainability of healthcare systems.

B. Fiscal and financial sustainability

2.18 **The second challenge to progress toward UHC is the effect of health spending on financial and fiscal sustainability.** Countries which have progressed most toward UHC spend more on healthcare. For example, public health spending is 6.6% of GDP in OECD countries which have substantially better access to quality healthcare than LAC which only spends 3.6%. Countries in LAC spend an average of 14% of their public sector budgets on health. However, the pattern varies markedly across countries. The share of public budgets going to health is lowest in Venezuela (7.6%) and Haiti (6.1%) and highest in Costa Rica (27.4%) and Chile (21.5%) (see Table 10).

2.19 **Government health spending varies dramatically across the region and with varying results.** Within the region, all levels of government combined in the Southern cone countries spend the most on health, about 5% of GDP, while governments in the Andean Countries spend the least, about 3.5% of GDP (see [Table 9](#) and [Figure 31](#)). Given income disparities in the region, spending varies by a factor of 10—public health expenditure per capita is US\$75 in Honduras, US\$91 in Guatemala and US\$111 in Nicaragua but over US\$1,000 in Uruguay, US\$878 in Chile, and US\$801 in the Bahamas.¹⁶ Nevertheless, this spending is not always efficient in the sense of providing effective good quality services that improve health.¹⁷ A study that compared the efficiency of public health expenditure per capita in achieving eight health outcome measures¹⁸ in 22 LAC countries vis a vis other middle-income and OECD countries found that all the countries in the region were among the 50% poorest performers and 12 of them were in the bottom 25% (Pinto et al., 2018). If countries with poorer performance improved to match the best countries, the same amount of funding could potentially increase life expectancy by 3.2 years, reduce under-five mortality by 7.1 deaths per 1,000 children, and extend skilled birth attendance by 7.6 percentage points. Greater efficiency was associated with using analysis to encourage cost-effective medications and treatments, better regulation of medical staff, and allowing patient choice of providers (Castelli et al., 2020).

¹⁶ WHO Global Health Expenditure Database, accessed February 7, 2020. Public health spending includes all levels of government and public agencies, like social insurance institutions, which receive contributions that are mandated by law.

¹⁷ The term “effective” is used in this document to indicate whether a healthcare service or intervention generates the expected outcome, independent of cost. “Efficiency” requires that, in addition to being effective, the cost for the service or intervention is minimized or at least reasonable relative to alternative uses of those funds.

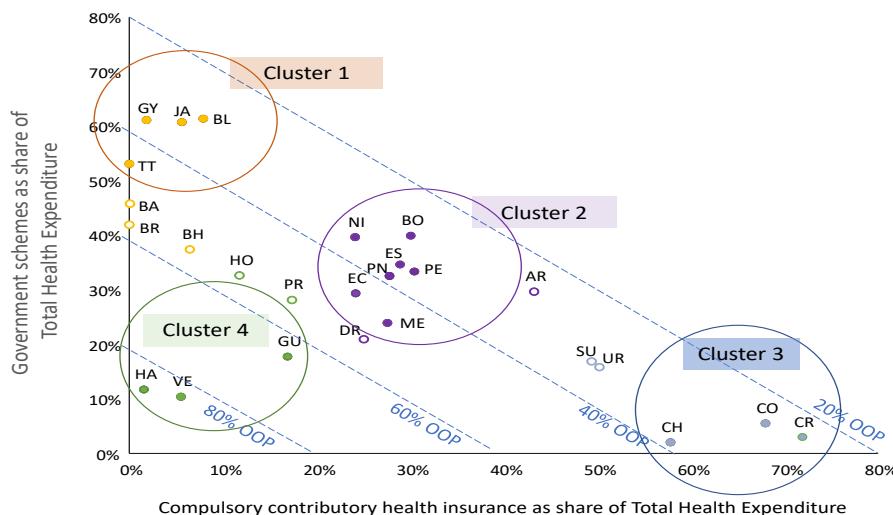
¹⁸ Life expectancy, under five mortality, DALYs, access to health care, immunization skilled birth attendance and two measures of equity.

- 2.20 **Out-of-pocket (OOP) spending is high and contributes to impoverishment.** In 2017, OOP spending as a share of total health expenditure averaged 33% in the region, compared to 22% in OECD countries. OOP spending was below 20% in only four of the region's countries and exceeded 40% in nine of them (see [Figure A](#)). Survey data (from before COVID-19) showed that 10% of the region's households experienced catastrophic spending defined as expenditures exceeding 10% of household monthly income (Wagstaff et al., 2020). The burden of OOP spending is disproportionately higher for lower-income families and those living in poorer communities (Amaya-Lara, 2016; Chaumont et al., 2019).
- 2.21 **Fragmented health financing makes it difficult to progress toward UHC because it is inequitable and inefficient.** Slowing the pace of health spending growth through greater efficiencies is the main way to reach more people with better quality services and with greater financial protection. However, in general, healthcare services in the region are financed through many uncoordinated and overlapping institutions: social insurance, national ministries, state health departments, private practices, health insurance firms, etc. (Bossert et al., 2014; Martínez Franzoni & Sánchez-Ancochea, 2018). This fragmentation is inequitable because the amounts that people pay and the services they can use are often inversely related to their income, their ability to pay or their healthcare needs, leading to high levels of out-of-pocket spending, poor financial protection, and limited risk pooling. This fragmentation is also inefficient because each institution allocates its funding according to different criteria, creating incentives for healthcare providers and patients that are incompatible with allocating resources to the services and people that would improve population health the most (Atun et al., 2015; Cotlear et al., 2015; Martínez Franzoni & Sánchez-Ancochea, 2018).
- 2.22 **Fragmented health financing also affects labor markets and fiscal balances.** Countries with mixed systems relying on general taxation and social insurance contributions may also create disincentives for formal employment when healthcare services are provided to informal sector individuals who do not make contributions (Levy & Schady, 2013). Further problems occur when people move from one institution to another. For example, in economic downturns, when formal sector workers lose their jobs and social insurance, many are likely to seek healthcare services provided by the Ministry of Health at a time when government revenues are falling. This is happening during the current COVID-19 pandemic: in the second quarter of 2020, the number of employees contributing to social insurance fell by an average of 8% in seven countries for which data is available, representing a loss of 3.2 million jobs.¹⁹
- 2.23 **Most countries in the region have fragmented health systems.** Different sources of funding for healthcare service institutions provide an indication of this fragmentation, with countries falling into four main clusters: general taxation predominates in the first cluster, mixed financing in the second, social insurance financing in the third, and out-of-pocket in the fourth (see [Figure A](#)). The problems of fragmentation are serious for countries with mixed financing (Cluster 2) and high out-of-pocket spending (Cluster 4). In these countries, inequities in healthcare

¹⁹ Household survey data in seven Latin American countries: Argentina, Chile, Colombia, Costa Rica, El Salvador, Mexico, Dominican Republic and Uruguay (<https://observatoriolaboral-bid.herokuapp.com/> accessed August 27, 2020).

services are highest, whether in terms of skilled birth attendance or access to cancer treatments (Barros et al., 2020; Doubova et al., 2020; Murillo, 2019). Countries in Clusters 1 and 3 have generally reduced the degree to which risk management and cost-shifting between subpopulations creates inequities and inefficiencies; especially in comparison to Clusters 2 and 4.

Figure A. Sources of Financing in Latin America and the Caribbean, 2017



Source: World Health Organization (WHO), Global Health Expenditure Database, Accessed July 5, 2020.

Note: OOP stands for Out-of-Pocket spending but in this figure, it also includes voluntary private health insurance premiums which are substantial in countries like Brazil.

- 2.24 **Progressing toward UHC will come with a cost.** Health spending in LAC is likely to increase because of rising incomes, population aging, evolution of prices, and changing technologies (Fan & Savedoff, 2014; Pinto et al., 2018). Regional per capita health spending is forecast to increase 1.5% per year in real terms between 2015 and 2040 (Dieleman et al., 2016, 2018); and public health spending could increase from its current level of 4.8% of GDP to over 7% by 2045 (Panadeiros & Pessino, 2018). In the short run, however, countries are facing an economic crisis that is likely to reduce health spending on the order of 4% between 2022 and 2024 (Gheorge et al., 2020).
- 2.25 **Efforts to improve efficiency face obstacles.** Addressing these spending pressures on healthcare systems will require achieving greater efficiency by allocating resources across facilities, regions, and health conditions that generate the most health gains for a given cost (termed “allocative efficiency”) and by managing services to produce as much health gain as possible from the same amount of inputs (termed “technical efficiency”) (Pinto et al., 2018). This is the only way to slow the pace of spending growth. Yet the health sector often prefers to continue with existing practices rather than measure performance, find ways to serve the population better with existing resources, change resource allocations, and adopt new ways of providing services. In those cases where the health sector does make such changes to increase efficiency, it may be resisted. For example, countries that have tried to limit public financing for medications or treatments that are not cost-effective have been opposed by some medical providers, pharmaceutical companies or high-income households who lobby against policy decisions or enter litigation to obtain high-cost interventions from the government,

a phenomenon known as the “judicialization of health” (Andia & Lamprea, 2019; Hawkins & Rosete, 2017; Lopes et al., 2019; Vargas-Peláez et al., 2014). Protecting rational social priority setting processes is difficult because governments often lack the legal frameworks, regulatory environments, and legitimacy to uphold these policy processes (Cañón et al., 2016; Ú. Giedion et al., 2018).

- 2.26 **The economic crisis caused by the COVID-19 pandemic will make progress toward UHC harder.** Most countries have increased spending for health and social assistance programs while delaying or cutting taxes and capital expenditures. The net effect of additional spending and foregone revenues specifically responding to the pandemic represents more than 9% of GDP in Brazil, Chile, and Peru; and less than 3% in Argentina, Mexico, and Colombia. Most of these additional expenditures are going to social protection or economic programs rather than health, but experiences have varied. Health spending is half of this net change in Colombia, but in other LAC countries health only accounts for between 2% and 21% of the pandemic response measures (IMF, 2020). When looking at health spending overall, the variation is even larger. Out of 13 countries with data on execution of all public health expenditures, three spent less on health in the first half of 2020 than the same period in 2019; four spent more, ranging from 6% to 15%; while six increased health spending by more than 15%.
- 2.27 **The implications of the economic crisis for the health sector are uncertain.** Countries may now recognize the importance of protecting population health and seek to invest substantially more in preparedness and health system capacity to avoid such serious consequences in the future (see [Box 2](#)). Alternatively, fiscal constraints could lead countries to maintain or reduce public health expenditure, leaving them less prepared for future crises and farther from achieving UHC. Some countries may take advantage of the crisis to effect reforms in health financing and healthcare service delivery systems that would significantly improve efficiency, making it possible to address population health needs and emergency preparedness with fiscally responsible increases in spending.

Box 2. COVID-19 and the Health System: preparing, responding, and recovering

Since 2000, diseases like plague, dengue, and cholera have all re-emerged in different parts of the world; drug-resistant strains of malaria and tuberculosis have appeared; and previously unknown diseases have spread, including SARs (2002), H1N1 (2009), Middle East respiratory syndrome-MERS (2012), and Zika (2015). Without continued vigilance and public investments, such diseases will continue to generate major social dislocation in coming years.

The COVID-19 Pandemic

COVID-19 is a disease that was first reported by China in December 2019 and by Brazil on February 26, 2020. COVID-19 then spread throughout Latin America and the Caribbean, with 15.9 million confirmed cases and about 516,000 confirmed deaths in 2020 (European Center for Disease Control and Prevention -ECDC). As a region, LAC has about 8% of the world's population, but in 2020, it accounted for 18% of officially reported COVID-19 cases and 28% of the confirmed deaths. Yet even these figures are underestimates. In 2020, confirmed COVID-19 deaths were only two-thirds of excess deaths in Mexico and about one-third of excess deaths reported in Peru (see [¶2.28](#)).

As a new disease, the approach to clinical management initially focused on treating COVID-19 like an acute respiratory disease; but clinical observation and medical research later identified other ways in which the disease affects people, leading to changes in medical protocols and raising questions about how to treat patients who suffer longer term chronic effects of the disease (WHO, 2020).

The delay in the disease's arrival from Asia and Europe allowed many LAC countries to adopt policies aimed at slowing the disease's transmission chain including lockdowns, suspension of international travel, cancellation of large events, and closure of schools and universities. The strictness and duration of these measures varied across countries along with efforts to expand testing, contact tracing, and intensive care treatment capacity. Countries also varied in terms of internal coordination, leadership commitment, enforcement, and public cooperation.

Emergency preparedness for crises

COVID-19 has highlighted the region's LAC's weak capacity to address a major public health crisis. Under normal conditions, the region has limited and uneven capacity to provide good quality healthcare. During an epidemic, these weaknesses are exacerbated by increased demand, illnesses and death among healthcare professionals, and bottlenecks in obtaining supplies. The region also faces a legacy of large disparities in income, housing, livelihoods, and healthcare quality which make it harder to control the spread of disease and generally leads to a greater burden of death, illness and hardship on less advantaged populations.

Living through the current pandemic and being prepared for future ones will require serious investments in Emergency and Disaster Risk Management (EDRM). Countries have already committed to complying with the International Health Regulations (IHR 2005), a legally binding international agreement that outlines government responsibilities for prevention and control of diseases. They have also signed the Sendai Framework which specifies how governments should deliver and finance core functions of multisectoral EDRM, including such things as establishing effective coordination mechanisms for operations; regulations for infection control; surveillance systems; and infrastructure related to diagnostic laboratories, logistics, and resilient health facilities.

The institutional arrangements needed to govern and implement health EDRM functions are not financially out of reach. The capital costs for the health sector to be prepared for emergencies has been estimated at US\$4.33 per capita in low-income countries and US\$1.25 in middle-income countries. Associated annual recurrent costs are estimated to be about US\$4.16 and US\$1.41 per capita, respectively (Peters et al., 2019). COVID-19 showed that countries which learned from the SARS epidemic in 2002, such as Singapore and South Korea, have fared much better in the current pandemic than those that did not.

Responding and recovering after the crisis

Preparedness is not just about the ability to respond to the immediate public health emergency. It is equally important to anticipate, and prepare to mitigate and manage, the direct and indirect impacts of the pandemic on health and the economy in the medium term. Mental health is an example of a condition which is relatively neglected by health systems in the region – especially among the young – and which will require much greater attention after this pandemic (Gajaria et al., 2020; Kohn et al., 2018; Kontoangelos et al., 2020; Patel et al., 2018). The COVID-19 crisis will have generated mental health problems among previously healthy people and exacerbated conditions for those with pre-existing ones (Llibre-Guerra et al., 2020). In general, the combined effects of the pandemic from deaths among family members, chronic conditions among those who recover, stress and uncertainty, malnourishment, domestic violence, disruptions to preventive care and chronic care management, social isolation, and interrupted education will require substantial responses from the health sector in particular and public services more generally over the coming years (Abad et al., 2020; Jakovljevic et al., 2020; Moreno et al., 2020).

While it has been critical and ethically necessary to prioritize immediate response activities, the pandemic presents an opportunity to leverage the investments in organizations, infrastructure, personnel capacity, information systems and networks to ensure that the other critical health system bottlenecks that have been exposed are addressed. The overall result in the long term will be more effective and efficient healthcare services, a sustained investment in emergency response, and increased resilience, that is, the ability to prepare for, manage (absorb, adapt and transform) and learn from shocks (Thomas et al., 2020).

C. Healthcare services

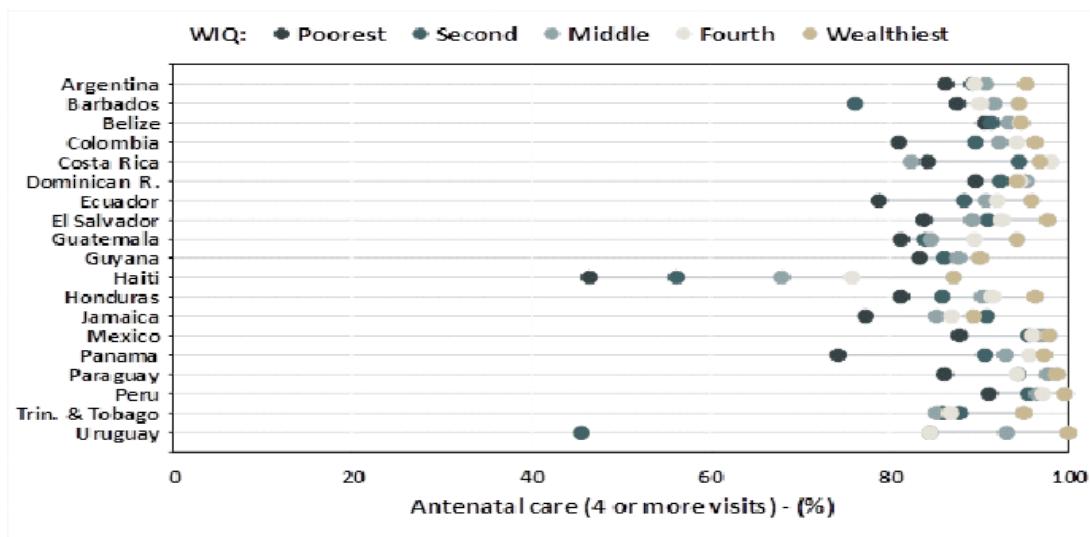
- 2.28 **Healthcare service access has increased.** Despite population growth, healthcare access has increased. Substantial gains occurred before the 1990s in basic care, such as DPT immunization which reached 85% coverage in 1995 and

now stands near 90%. Others are more recent, such as professional birth attendance which is greater than 85% in 21 out of 26 countries. One indication of general access to healthcare is that only 19% of adults in Peru said they never consulted a health professional, with people reporting even lower shares in Chile (13%), Brazil (11%), Argentina (9%) and Mexico (9%) –shares which are on a par with Malaysia (18%), the US (9%) and France (7%). Between 57% and 76% of adult women in these Latin American countries report that they generally consult a gynecologist at least once a year –more than the share reported in France (48%) or the US (51%) (IPSOS Global Advisor, 2018).

- 2.29 **Nevertheless, access to services is inequitably distributed** and more limited for populations that are disadvantaged because of their income, gender, ethnicity, disability, or location. Ethnic minorities tend to have less access to healthcare services due to cultural barriers and discrimination (Kempe et al., 2013; King et al., 2009). In the poorest quintile, the share of women receiving four antenatal visits was 10 percentage points (pp) lower than for the richest quintile in seven of 21 countries with data, including Uruguay and Barbados (Barros et al., 2020) (see [Figure B](#)). Fewer migrants are formally affiliated with healthcare systems than native populations, with large gaps in Colombia (68 pp), the Dominican Republic (57 pp), Mexico (28 pp), Peru (25 pp), and Panama (21 pp).²⁰ Health infrastructure and communication materials create barriers to healthcare services for people with limited mobility, vision or hearing; for example, in Chile, 30-37% of people with disabilities report difficulties accessing healthcare services compared to only 20% among those without disabilities (SENADIS, 2016). In rural areas, women are less likely to get antenatal care which is of poorer quality than in urban areas; they also are less likely to be attended by skilled birth attendants or receive postnatal care (Barros et al., 2020) (see [Figure 56](#), [Figure 57](#), [Figure 58](#), and [Figure 59](#)).
- 2.30 **The quality of healthcare services is generally low.** Poor-quality healthcare causes 10 to 15% of all deaths in low- and middle-income countries; and productivity losses between US\$1.4 and US\$1.6 trillion each year (Berwick et al., 2018; NAS, 2018). In LAC, only 30% of deaths that could have been avoided by adequate healthcare were due to lack of access; the other 70% occurred when people received poor quality care due to unskilled staff, inadequate surgical facilities, or improperly managed chronic conditions (Kruk, Gage, Joseph, et al., 2018). Specific studies have demonstrated poor quality service in the region's countries related to managing diabetes (Rubinstein et al., 2015); and breast cancer survival rates (Murillo, 2019). Studies have shown that lower income, marginalized, and stigmatized populations typically receive worse quality healthcare than others (Dmytraczenko & Almeida, 2015; Mokdad et al., 2015).

²⁰ "Formal affiliation" indicates that an individual is registered with a specific health insurance or healthcare provision service. These estimates are derived from National Household Surveys, except in Chile (National Health Survey) and Mexico (National Health and Nutrition Survey). The figures for migrants' access should be considered indicative because the surveys are not designed to be representative of the migrant population.

Figure B. Antenatal Visits by Wealth Quintile in Selected Countries



Source: (Sanhueza et al., 2020)

- 2.31 **The quality challenge has many dimensions.** To improve healthcare service quality, the region will require more health professionals with new skills, yet in almost half of the region, the number of students entering medical education has not increased (Liu et al., 2017; Lorenzoni et al., 2019; Robles et al., 2019). Aging and poorly maintained infrastructure also create problems for providing good quality healthcare. Further difficulties are created when financial resources are allocated without regard to population health needs, personnel lack training and appropriate supervision, and when logistical and procurement systems are inflexible and fail to achieve value for money. Discriminatory behavior by healthcare professionals is not uncommon, affecting the quality of services and potentially causing physical or psychological harms. For example, indigenous people report regular experiences of disrespect and substantial amounts of physical or mental abuse when seeking medical attention (Castro et al., 2015). Ultimately, providing high quality healthcare services requires a system of governance that has the authority and mandate to focus on improvements in healthcare quality and the capacity to hold the different elements of the system accountable for performance.
- 2.32 **Fragmentation among healthcare providers and between public and private sectors contributes to poor quality care.** Healthcare in the region—whether public or private—is typically managed in isolated units, with little communication between the many facilities, specialties, levels of care, and social services that could, instead, be managed as integrated organizations that provide better people-centered care at lower cost (Hansen et al., 2015; Kringos et al., 2013; Macinko et al., 2017; Vasan et al., 2014). In most countries, public and private providers are subject to different regulations, financing arrangements and payment mechanisms—operating in parallel without meaningful connections. Surveys show that the private sector provides about 31% of inpatient care and 37% of outpatient care in the region for services related to acute respiratory infections, fever, and diarrhea (Montagu & Chakraborty, 2020). These figures are comparable to the estimates of OOP spending—the main source of private healthcare revenue—which accounts for about 33% of the region’s health spending.

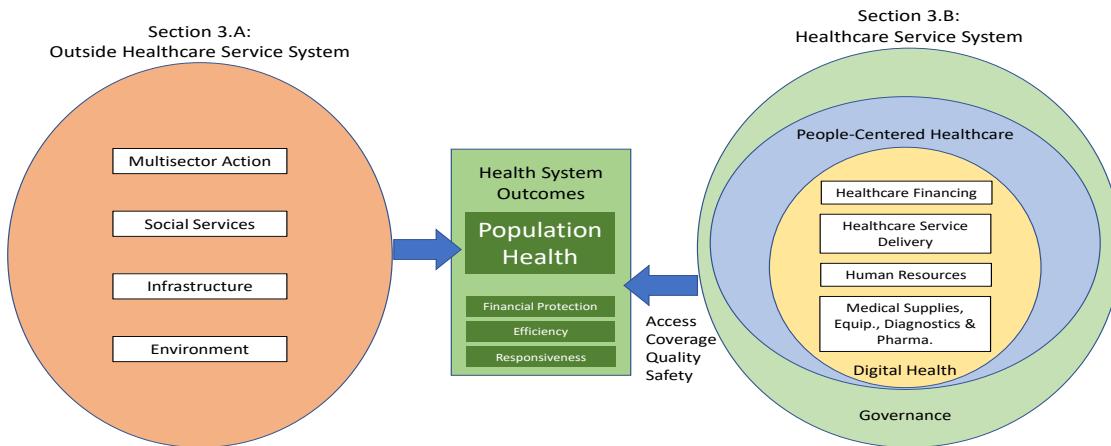
- 2.33 **Alternative approaches exist.** Some countries, including Chile, Colombia, and Uruguay, have explicitly incorporated private insurers and healthcare providers into their national health insurance systems. Brazil's publicly financed system (SUS—*Sistema Único de Saúde*) directly provides care in 2,342 public hospitals but it also contracts tertiary services from about 90% of the country's private hospitals. In 2017, almost 50% of the country's 4,362 private for-profit and non-profit hospitals relied exclusively on funding from the SUS, while another 40% received funding from both public (SUS) and private sources (either insurance or out-of-pocket) (Viacava et al., 2018). Under certain conditions, competition between healthcare providers, and between the public and private sector, can generate positive incentives to improve healthcare quality and reduce costs. However, these positive conditions are generally lacking because, for example, people may not have reliable information about the medical quality of healthcare or doctors may have conflicts of interest by practicing in more than one sector (Jumpa et al., 2007; McGuire, 2012). The lack of provider integration, limited use of private contracting, and distorted provider incentives are factors that constrain the health sector's capacity to reach more people, more equitably, with better quality healthcare, and at reasonable cost.
- 2.34 **The pressures to treat COVID-19 patients has disrupted other healthcare services.** During the initial months of the pandemic, routine vaccination and elective surgeries were suspended in many countries and social distancing measures impeded routine services for screening and chronic disease management. A global survey of health providers reported that the COVID-19 pandemic has worsened conditions among patients with diabetes, heart disease, hypertension and mental health problems due to reduced access to care (Chudasama et al., 2020). In LAC, most countries lacked programs to assure that individuals with diabetes could obtain their medicines without risking exposure to COVID-19, despite being at higher risk of mortality from that disease (Barone et al., 2020). Future healthcare services are put at risk because of the pandemic's impact on personnel: almost 570,000 health workers contracted COVID-19 and 2,500 of them died from it, as of September 2, 2020 (PAHO, 2020a).
- 2.35 **Fortunately, some of the responses to the pandemic may have positive and lasting effects on the healthcare service system.** For example, health system productivity will benefit from new forms of hospital bed management in Argentina, Chile, Peru, and the Caribbean; more telehealth services in Argentina, Colombia, Honduras, Peru, and Uruguay; stronger laboratory and surveillance systems in numerous countries; reinforced PHC interventions in Honduras and El Salvador; and greater investments in digital health architecture in Ecuador. In coming years, countries will face the prospect of treating COVID-19 patients while re-establishing non-COVID-19 healthcare services. Reactivating healthcare systems with greater efficiency, quality, and resilience will be critical to assuring that future epidemics can be handled with fewer adverse consequences.
- 2.36 **In sum, making progress toward UHC requires actions to address all three of these challenges**—the disease burden, fiscal and financial sustainability, and low productivity and poor-quality healthcare services—within the longer-term context of pressures from climate change and the medium-term consequences of the COVID-19 pandemic. The next section presents the evidence on how best to address these challenges, which involves actions to reduce the risk factors for ill

health, to improve the amount and efficiency of public health financing, and to improve the quality and equity of integrated healthcare service delivery.

III. EVIDENCE ON THE EFFECTIVENESS OF HEALTH POLICIES AND PROGRAMS

- 3.1 This section presents what is known about accelerating progress toward UHC in the face of the challenges posed by the disease burden, fiscal and financial pressures, and low productivity and poor-quality healthcare services. It begins (Part 3.A) by discussing the multisector actions that reduce the risk factors responsible for the largest share of the disease burden because, without these actions, no country can possibly afford to progress toward UHC. Addressing the social, economic, and environmental causes of ill health are a necessary condition for improving population health and reducing avoidable demands on the healthcare service system (see Figure C). After discussing multisector action, Part 3.B addresses how to improve the quality and equity of healthcare service provision while increasing its efficiency—which is necessary to slow the pace of health spending growth. The detailed discussion of the healthcare service system uses a modified scheme from Papanicolas and Smith (2013) to address, in turn, the role of people in seeking care, health financing, service delivery, human resources for health, medical technologies, digital health, and governance (Papanicolas & Smith, 2013).

Figure C: Healthcare service system dimensions and external factors



Note: Healthcare System Framework adapted from WHO 2007 and Papanicolas and Smith 2013.

A. Multisector action

- 3.2 Countries have many opportunities to address health risks related to harmful consumption, violence, and pollution. These include proven cost-effective interventions that use taxation and subsidies, laws and regulations, and behavioral strategies. Taxation (or eliminating subsidies) can reduce the effective demand for harmful products like fossil fuels or tobacco. Laws and regulations affect what products can be manufactured and marketed, the amount of pollution emitted from different activities, and the relative profitability of producing healthier or less healthy goods. Behavioral strategies seek to alter individual consumption

and business decisions through information, persuasion, and exploiting systematic behavioral tendencies. While the health sector has opportunities to address some of these risks; many of the most cost-effective tools are in other sectors,²¹ particularly those related to fiscal policies, commercial regulation, and education.

- 3.3 **One of the most cost-effective tools available to governments to reduce consumption of harmful products are excise taxes** (WHO, 2017). Higher taxes on cigarettes are particularly effective at preventing premature death by reducing smoking; encouraging people to quit; and discouraging young people from starting (NCI & WHO, 2016; Szklo et al., 2017; Task Force on Fiscal Policy for Health, 2019). For example, tobacco control measures implemented by Brazil since 1989 will avoid an estimated 7.5 million premature deaths from smoking by 2050; with higher taxes accounting for 4.2 million of these preventable smoking-related deaths (Szklo et al., 2017). Since 2015, Chile, Dominican Republic, Ecuador, Jamaica,²² Mexico, Panama, and Peru have raised taxes on sugary beverages and foods with added sugars in order to reduce the prevalence of being overweight or obese. While less research is available on sugar consumption than smoking, the available evidence consistently confirms that such taxes can reduce weight gain and improve health outcomes (Colchero et al., 2015; Long et al., 2015; Wright et al., 2017). Research demonstrates that excise taxes on alcohol are also beneficial to health (Chisholm et al., 2018; Poznyak & Rekve, 2018; Wagenaar et al., 2010).
- 3.4 **Labelling laws, social marketing, behavioral strategies, and regulations can reduce consumption of harmful products.** Markets fail when consumers do not know what they are buying; and firms can profit from marketing and behavioral strategies that encourage unwise amounts of consumption. To counter such market failures, government policies can require disclosure of product information to consumers and engage in social marketing or behavioral interventions to help consumers make healthier choices (Villalobos Dintrans et al., 2020). For example, Chile has enacted food labelling laws that provide easily understood warnings on foods that are high in sugar, salt, calories or fat. In Brazil, an NGO program called *Vida Urgente* used behavioral interventions to successfully reduce drunk driving. The interventions included street theater, partnering with taxi companies, and providing party buses (Poznyak & Rekve, 2018). Regulations can also act on the supply side of these markets. Some of the most cost-effective regulations limit points of sale or store hours for alcohol or cigarettes; for example, several Colombian cities have limited sales during weekends to reduce violence (Finan et al., 2018; Sanchez-Ramirez & Voaklander, 2017; Sanchez et al., 2011).

1. Working with other social services

- 3.5 **Every social policy affects population health.** A person's health and life chances are determined more by where they live, in terms of environmental, social, and economic conditions, than by their genetic or biological composition (Berkman et al., 2014; Marmot & Wilkinson, 2005). Some social policies can contribute to

²¹ For comprehensive treatments of policies in other sectors that affect health, see Sector Framework Documents discussed in ¶1.4 and ¶1.5.

²² <https://www.mckeany-flavell.com/sugar-beverage-taxes-latin-america-caribbean-03-07-19/> accessed Jan. 6, 2021.

better health in the short term; for example, support services for elderly people living at home affect today's quality of life while managing chronic conditions, assuring proper nourishment, and addressing mental health. Other social programs improve health over a longer time horizon: early childhood programs have been shown to improve adult health (Campbell et al., 2014; Walker et al., 2011); programs promoting exercise or smoking cessation among adults have demonstrated benefits in old age (Jha & Peto, 2014; Pérez-Cuevas et al., 2015).

- 3.6 **Efficient social services are people-centered within a life-cycle framework.** Social services are more effective when they respond to the needs of people within their social and cultural context and reflect a broader perspective on each person's overall life cycle (Fazel et al., 2014; Rutter et al., 1979). For example, people seeking job counseling may also need food assistance, mental health services, or early childhood development support for their children. Addressing the diversity of personal and social experiences through the dimensions of gender, ethnicity, language, culture, and sexual orientation is part of making the mix of social policies respectful, appropriate, effective, and efficient.
- 3.7 **People benefit when social services are linked.** Social services can be linked through *integration* within a single agency; through providing *cross-support*, that is, operating independently while contributing to goals outside their core mission; and through *coordination* such as by sharing information, designing mutually complementary activities, and/or screening and referral. Of these three approaches, integration of social services related to health will be discussed as a key strategy within the health sector below. Cross-support and coordination will be discussed here.
- 3.8 **Cross-support can improve health and other social outcomes.** The relationship between education and health is particularly strong; for example, instruction on health topics in school curricula has effectively improved diets and reduced obesity (Shekar & Popkin, 2020); improved adolescent sexual health (Franco et al., 2006); and reduced drug use (Faggiano et al., 2014). Schools are also an important setting for promoting and addressing mental health issues among young people (Fazel et al., 2014; Hoagwood et al., 2007). A Jamaican program using DVDs in a health center waiting room, alongside a community health worker demonstrating stimulation activities, benefited children under two years old and their mothers (Chang et al., 2015). Health services can be coordinated with ECD programs to improve early detection of developmental delays and disabilities in children, facilitating treatment and referral to necessary support services (Black et al., 2017; Oberklaid, 2014). Long-term care (LTC) can improve the elderly's quality of life in terms of physical, social, and mental well-being (Barnay & Juin, 2016; Forder et al., 2018). LTC services also improve the health of those typically responsible for the intensive care required by a dependent older person in their household (Coe & Van Houtven, 2009). The health sector is often the first point of contact for survivors of violence against women and girls (VAWG) which gives health professionals the opportunity and responsibility to facilitate disclosure of violence or abuse; provide appropriate medical services and follow-up care; and offer support or gather forensic evidence, particularly in cases

of sexual violence.²³ Even more effective are victim advocates working in collaboration with health services (Bybee & Sullivan, 2002).

- 3.9 **But cross-support is not always effective or efficient.** Decisions regarding when a social service should support health or vice versa should consider effectiveness, relative costs, and alternatives. For example, LTC appears to improve health and reduce costs – it is both effective and efficient. By contrast, well-meaning efforts to have ECD staff implement health programs or assigning community health workers to carry out ECD activities have often yielded few benefits while taking staff away from their primary functions (Alaref et al., 2017; Andrew et al., 2016; Attanasio et al., 2014; Lopez-Boo & Ferro, 2020).
- 3.10 **Coordination is another way to improve people-centered services.** People encounter social services in different ways throughout the life cycle. Coordination among social services can improve efficiency by screening and referral; reinforcing common messages; and sharing client information among providers (Egger et al., 2012; Macadam, 2008; Sasaki et al., 2009). Efficient coordination can sometimes be improved through communication and technology. For example, in Costa Rica, the *Sistema Nacional de Información para Adolescentes*²⁴ combines data from health, education, and social protection services to determine if adolescents are receiving coordinated care to reduce teen pregnancy. During the current pandemic, El Salvador has shared data between the ministries responsible for health and social assistance to identify people who are eligible for cash transfers but were not registered (Andrade et al., 2020).

2. Working with housing and urban development, infrastructure, and environment²⁵

- 3.11 **Collaboration on housing, urban development, infrastructure, and the environment can also improve population health.** People are healthier when have good quality housing with access to potable water, sanitation, clean air, safe transportation, and sustainable energy. They are healthier when their communities are built to encourage and support social interaction and healthy physical activity. And they remain healthier when infrastructure is resilient and supports emergency responses to emergencies related to natural disasters and extreme weather.
- 3.12 **Every decision involved in building infrastructure or altering the environment has an impact on human health,** but these decisions are not made by officials or private citizens whose primary responsibility is to improve health. Institutional collaboration between health agencies and other public agencies can improve the policies and regulations which influence infrastructure design and environmental protection, both of which have large and long-lasting impacts on population health. Such efforts are more equitable when they explicitly address the higher rates of exposure to environmental threats and infrastructure deficits in locations where poorer and more marginalized groups work and live.

²³ WHO. "Responding to intimate partner violence and sexual violence against women: WHO clinical and policy guidelines." http://apps.who.int/iris/bitstream/10665/85240/1/9789241548595_eng.pdf.

²⁴ <https://www.ministeriodesalud.go.cr/index.php/acceso-a-sistemas-de-informacion>.

²⁵ See Housing and Urban Development SFD, Transportation SFD, Energy SFD, Climate Change SFD, and Environment and Biodiversity SFD.

- 3.13 **Sustainable Infrastructure can be designed for safety, resilience, and healthy life choices.** Indoor air quality improves when people use non-polluting stoves (Barnes et al., 2015). Establishing and enforcing building codes reduces mortality and morbidity from fires, earthquakes, and extreme weather (World Bank, 2015). People are more likely to get exercise from walking when urban development plans create mixed use residential and commercial areas with sidewalks, paths, and car-free zones (Mackett & Thoreau, 2015). Fewer traffic accidents happen when road designs take human behavior into account, reduce sharp turns, and limit interactions between buses, cars, bicycles, and pedestrians (Martinez et al., 2018). Conventional (e.g., buses) and innovative (e.g., cable cars) public transit in urban areas improves access to schools, health facilities, social services, and healthier food purchasing options. For example, locating services within walking and biking distance of communities or improving public transit options can offset the disadvantages experienced by poor households in gaining access to health services and schools (Jirón & Mansilla, 2013; Sarmiento et al., 2020; Villanueva, 2010). Evidence, from surveys in 11 Latin American cities, also shows that people with better access to mass transit and/or less congested roads are less likely to experience depression (Wang et al., 2019).
- 3.14 **Addressing climate change and implementing environmental programs improves health.** Decarbonization measures reduce Greenhouse Gas Emissions (GHG) and water and air pollution with positive effects on human health. Reducing tropical deforestation improves health by slowing climate change and its effects; and by reducing contact between human beings and sources of new infectious disease. Environmental programs can improve the nutritional content of cultivated crops, slow erosion that leads to landslides and injuries, and eliminate particulate matter from the air. Policies that encourage plant-rich diets can improve health and the environment, especially by reducing greenhouse gas emissions (Dietz, 2020).

B. Improving healthcare services: effectiveness, efficiency, and quality

- 3.15 **Healthcare systems have many dimensions which need to function as a coherent system to progress toward UHC.** These dimensions are: (i) people-centered healthcare; (ii) sustainable financing; (iii) healthcare service delivery; (iv) human resources; (v) medical supplies and inputs; (vi) digital technologies; and (vii) governance.²⁶ Though presented separately, the seven dimensions discussed here are not separable. Rather, they must relate coherently as a system—Involving the generation and use of information, mechanisms for accountability, financial flows and incentives, and results-focused management—in order to work together for improved health while slowing the spending growth.

1. People-centered healthcare

- 3.16 **People have an active role in maintaining their health and seeking care.** In supporting this, the health sector needs to: (i) engage individuals, families, and local communities in maintaining their own health; and (ii) assure access to good quality healthcare services. The strategy of people-centered or family-centered care encourages collaboration between people and providers in preventing, screening, and managing health conditions (NEJM Catalyst, 2017). It establishes

²⁶ Adapted from (Papanicolas & Smith, 2013).

a common focus on the individual's needs and experience at all care levels, from family care and specialists, to acute, emergency, and long-term care (Langberg et al., 2019). This collaboration requires better information, greater participation, and fewer social and economic barriers. It also requires valuing the contributions of individuals and the community to new approaches that improve healthcare access and quality, often described as "social innovation" (Castro-Arroyave et al., 2020; Castro-Arroyave & Duque-Paz, 2020; Dako-Gyeke et al., 2020).

- 3.17 **When people are better informed, they are healthier and less costly to treat.** People who are more health literate (i.e., they can obtain, understand, and use basic information to make appropriate health decisions): use more preventive services (Castro-Sánchez et al., 2016); change behaviors in response to public health messages (Wolf et al., 2020); adopt behaviors that prevent or delay the onset of NCDs (Afshin et al., 2016; Samdal et al., 2017); and, for those with chronic disease, engage in self-care that lowers their risk of hospitalization (Doubova et al., 2019). Improving communication between patients and healthcare staff, for example, via cellular phones, has improved the management of diabetes (Wu et al., 2017) and treatment of common illnesses like malaria (Dako-Gyeke et al., 2020). Community participation platforms have succeeded in raising the population's awareness and level of knowledge regarding breast and cervical cancer in Argentina, Mexico, Nicaragua, and Peru (Strasser-Weippl et al., 2015).
- 3.18 **Healthcare cannot be people-centered with cultural and social barriers.** Culturally competent healthcare approaches are needed to encourage engagement with people regardless of income, culture and language, gender, ethnicity, race, disabilities, place of birth, sexual orientation, and other factors that hinder access to good quality healthcare (Douglas et al., 2018; Handtke et al., 2019). People feel empowered to seek care and collaborate with healthcare providers when their beliefs, knowledge, attitudes, and motivations are in alignment (Rubio-Valera et al., 2014). Culturally adapting healthcare services can achieve this alignment and successful examples have been documented in Chile, Colombia, Ecuador, Guatemala, Peru, and Suriname (Gabrysch et al., 2009; Lubbock & Stephenson, 2008; Mignone et al., 2007; Tucker et al., 2013). Examples of cultural adaptation include hiring people from diverse backgrounds, training staff to speak patients' languages, helping patient's families engage in cultural practices near the patient, and incorporating cultural practices related to childbirth (Cordero Muñoz et al., 2010; Tan & Cho, 2019; Valentine et al., 2016). In Mexico, Nicaragua and Colombia, among other places, some programs integrate traditional birth attendants in the healthcare system by incorporating particular traditional indigenous practices in routine care, broadening community outreach, and creating links to public healthcare services. Training medical personnel in diversity, discrimination, and self-awareness regarding bias is another essential feature of people-centered care (Marcelin et al., 2019). PAHO has also endorsed efforts to generate knowledge regarding ancestral medicine, such as traditional indigenous medicine, for stronger intercultural approaches to health (OPS, 2017).
- 3.19 **Healthcare cannot be people-centered care with economic barriers.** When people need healthcare services, the direct costs of fees and indirect costs like transportation can dissuade them from seeking care. Prepaid public health financing is the most important way to address this problem which exacerbates income inequities. However, where fees or other costs are significant barriers,

targeted programs with demand-side incentives can help. Vouchers for transportation or fees can mitigate such barriers (Bernal et al., 2020). Conditional Cash Transfer (CCT) programs have a positive impact on use of preventive healthcare services (Quiñones & Roy, 2016) and have reduced gaps in access to healthcare services (de Souza Cruz et al., 2017). Eliminating public fees in Jamaica increased healthcare service access for the uninsured, reduced relapses of chronic illnesses for people between the ages of 40 and 64, and was associated with 44% fewer days lost from work (Beuermann & Pecha, 2020).

2. Healthcare financing

a. Mobilizing funds

- 3.20 **Healthcare services are predominantly financed from three sources:** (i) government taxes; (ii) mandatory contributions to social insurance or private health insurance firms; and (iii) voluntary payments by individuals for insurance premiums or out-of-pocket payment for services. Financial sources are considered public—in the sense that they are regulated by government action—if they involve general revenues, social insurance contributions or regulated mandatory insurance premiums. In theory, general revenues tend to lead to the fewest distortions in the economy. Social insurance contributions are a large source of revenue in many countries; however, they may create disincentives for formal employment.²⁷ In practice, Western European countries that pioneered the use of social insurance contributions have reduced their reliance on this source as a share of health expenditure and increasingly rely on general revenues. Premiums are a significant source of health funding in countries which mandate insurance coverage through private for-profit or non-profit insurers. The effect of such premiums on equity and efficiency depends on how they are regulated and whether they address income inequality; adverse selection; and fragmentation of financial risk pools.
- 3.21 **Countries that are closer to achieving UHC rely predominantly on public financing.** International experience indicates that it is public, compulsory, pre-paid financing that helps countries move towards UHC (Atun et al., 2015; Barroy H. et al., 2017; Cotlear et al., 2015; Jowett & Kutzin, 2015; Kutzin, 2012; Savedoff et al., 2012). Low levels of public financing are associated with less financial protection and worse health outcomes (Bokhari et al., 2007; Moreno-Serra & Smith, 2015; Xu et al., 2018). Countries in which public financing is a higher share of total health spending tend to provide more essential health services, have smaller gaps between the richest and the poorest quintiles in access to health services, and have fewer households impoverished by out-of-pocket spending (Xu et al., 2018). Nevertheless, raising the share financed by the public sector is not sufficient to achieve these results. Countries with similar income levels and public financing shares perform very differently in terms of access, equity, and the shares of households who are impoverished by out-of-pocket payments (Castelli et al., 2020; Pinto et al., 2018; WHO, 2010a).
- 3.22 **There is no optimal mix of health financing sources;** but evidence can guide policies toward more sustainable and equitable approaches. Countries will be

²⁷ See Labor Sector Framework Document.

more successful at mobilizing funds sustainably and equitably if they: (i) expand reliance on public financing; (ii) reduce reliance on compulsory contributions which discourage formal employment and limit job mobility (Levy & Schady, 2013);²⁸ (iii) raise funds from households in proportion to their capacity to pay in order to promote equity (Jowett & Kutzin, 2015); (iv) consider the administrative feasibility of collection to assure adequate funding; and (v) consider the stability of the funding source to improve the predictability of funding in the medium and long term (Kutzin et al., 2017). For countries with strong administrative capacity and large enrolments in social contributory schemes, the appropriate strategies are likely to focus on increasing administrative efficiency, reducing evasion, and improving linkages between provider payments and performance – including measurements of healthcare quality. For countries with small formal enrolment in contributory schemes, the most likely path toward universal health coverage will rely on general revenues, with governments providing services directly or purchasing them from private service providers. Either way, assuring fiscal sustainability will require accountability from providers for the use of public funds. Finally, countries in which no funding source dominates (see Cluster 2 in Figure A) will have to choose among strategies that are politically feasible and most likely to reduce fragmentation, increase equity, and improve healthcare provider performance.

b. Pooling funds

- 3.23 **Pooling funds spreads financial risk across the population, protecting individuals against high healthcare costs regardless of income.** For example, Costa Rica combines social insurance contributions and general revenues into one institution (*Caja Costarricense de Seguro Social* -CCSS) to finance healthcare for the whole population; this arrangement has contributed to Costa Rica's good performance in terms of equity and financial protection (Cotlear et al., 2015). By contrast, countries in which an individual's access to healthcare services depends on their place of residence or mandatory insurance affiliation have fragmented pools, leading to differences in resources, access, and quality that are unrelated to health needs. Eliminating this fragmentation is one way to improve pooling, such as Brazil's *Sistema Único de Saúde* (SUS) which replaced a mix of public healthcare services and social insurance institutions in a single agency.

- 3.24 **When pooling is not feasible, compensatory mechanisms can be used.** In decentralized systems, states will differ in their capacity to spend on health, but national level authorities can offset these differences through intergovernmental transfers. Similarly, systems with multiple insurers can function like a large pool when transfers offset differences based on health risks. For example, Colombians choose from among dozens of health insurers, but the *Administradora de Recursos del Régimen de Seguridad Social* (ADRES) provides money from general revenues to offset differences in per capita spending among them. This model is complex relative to single payer systems; however, it does offer opportunities for local innovation, such as health insurers owned and operated by indigenous organizations who can better adapt services to their communities' needs (Defensoría del Pueblo., 2005). In contrast to either unified pools or separate pools with compensatory mechanisms, countries which rely primarily on voluntary affiliation with insurers have few options to improve pooling and are

²⁸ See Labor Sector Framework Document.

subject to many problems that make them both inefficient and inequitable (Kutzin et al., 2017; Mathauer et al., 2019; Savedoff & Gottret, 2008).

c. Purchasing services

- 3.25 **The way healthcare providers are paid affects the quality, efficiency, and types of services offered.** “Purchasing” is the term used to describe paying for healthcare services, whether it involves procurement, reimbursement, or subsidy. Purchasing is said to be passive when providers are paid without reference to the population’s health needs or the effectiveness of services in improving health. By contrast, proactive or strategic purchasing transfers funds to providers based on health needs or performance, making providers accountable for the value of the services they offer (Mathauer et al., 2019; Preker & Langenbrunner, 2005). The financing literature has encouraged the implementation of proactive models or strategic purchasing of healthcare services as a policy instrument to improve health system performance (Diogene & Figueras, 2010; Klasa et al., 2018; Smith, 2012; WHO, 2010a).
- 3.26 **Strategic purchasing can improve allocative efficiency, link payments to healthcare needs and performance, and manage expenditure growth** (Klasa et al., 2018; Mathauer et al., 2019; Preker & Langenbrunner, 2005). Yet full strategic purchasing systems are uncommon. When they are not feasible, elements of the approach can still be useful, such as: information management systems; aligning payment methods with the kinds of services to be encouraged; modifying payment methods and rates to encourage greater productivity; and accreditation systems to encourage better quality. For example, using health technology assessments to purchase more cost-effective services is associated with greater health system efficiency in a study of LAC and OECD countries (Castelli et al., 2020). Countries in the region have also improved efficiency by linking payments to performance (as in Argentina’s *Plan Sumar* and various programs under the Mesoamerica Health Initiative) or introducing management contracts for hospitals (as in Brazil). Nevertheless, most of these efforts have been implemented around the margins of core public health spending which is still largely driven by rigid budgetary processes and fixed payments to providers.
- 3.27 **Most health systems include different payment methods.** The most common ways to pay providers are fee-for-service, capitation, Diagnosis Related Group (DRG), and salaries.²⁹ Efforts to improve efficiency tend to rely less on conventional fee-for-service arrangements (in which providers can increase their incomes by increasing volumes and prices) and fixed salaries (in which case a provider’s income is unaffected by low productivity). Instead, purchasing reforms have experimented with negotiating service volumes within a budget cap; paying the average cost of treating a given disease (e.g., through DRGs); or introducing

²⁹ When a service provider is paid fee-for-service, it means they receive a fixed payment for each service provided. Capitation involves paying a provider a fixed amount per person with the requirement that they provide whatever services that person may need during the covered period. Diagnosis Related Groups (DRGs) are similar to fee-for-service in that the provider is paid a fixed amount for every additional person treated. However, unlike Fee for Service (FFS), the payment is based on the average cost of treating that standardized disease group. Finally, salaries are payments to providers based on the time they spend at work, regardless of the number or quality of services provided.

capitation (paying a risk-adjusted fee per person regardless of the services required during the year).

- 3.28 **The efficiency of the provider payment mix depends on both context and design.** Fee-for-service payments might be used to encourage greater utilization of cost-effective interventions including many preventive interventions. Simultaneously, capitation payments could encourage providers to promote preventive services, manage chronic conditions better, and refrain from inducing unnecessary treatment (Miller et al., 2013). While many OECD countries use capitated payments for primary care and DRGs for hospital inpatient care, this “best practice” is not common in LAC where activity-based hospital payments and financial incentives related to efficiency or quality of care are used in very few countries (Lorenzoni et al., 2019). Public healthcare systems also need to align themselves with effective Public Financial Management reforms to ensure predictable budgeting, improve timely execution, and build better financial accountability (Cashin et al., 2017; Sarr, 2015).

3. Healthcare service delivery

- 3.29 **Healthcare service delivery is complex** due to variations in health conditions, medical treatments, forms of prevention, staffing strategies, inputs, supplies, and organizational approaches. Current best practice suggests that Integrated Health Service Delivery Networks (IHSDN) are the most promising way to deal with this complexity, within which PHC plays a leading role. Building a healthcare system which embeds such networks within supportive financing, accountability, and information systems is necessary for them to function well.
- a. Primary health care approach
- 3.30 **The PHC approach lays the foundation for meeting the population’s needs** in a way that is effective, sustainable, equitable, and patient-centered (Starfield, 1998). Implementing a PHC approach means that people have access to services that meet most of their healthcare needs, continue throughout their lifetime (“from the cradle to the grave”), and are organized to assure continuity and coordination between the health system’s different providers and levels of complexity (Pelone et al., 2013; Starfield, 1998; Vilaça Mendes, 2013).
- 3.31 **PHC is more than an entry point, it also prevents and treats the greatest number of health problems more equitably.** A well-functioning PHC approach engages with people to keep them healthy, not just to treat them when they are sick. Because it is geared towards prevention, the PHC approach can identify health risks and problems and address them in a timely manner (Hansen et al., 2015; Kringos et al., 2013; McCabe et al., 2013; Vasan et al., 2014). Studies in the United States, the European Union, and several Latin American and Caribbean (LAC) countries have documented an association between systems emphasizing preventive care and lower general and child mortality, fewer avoidable hospitalizations, and longer life expectancy (Barkley et al., 2016; Bastos et al., 2017; Pesec et al., 2017; Valentijn et al., 2013). When primary health care services are widespread, they have reduced health inequities across income groups and racial disparities in mortality (Hone et al., 2017).

b. Integrated health service delivery networks

- 3.32 **Integrated healthcare networks are a tool for continuous coordinated care.** To be effective, primary health care services need to be part of a continuous and coordinated system involving different providers and levels of complexity (Hansen et al., 2015; Krings et al., 2013; Macinko et al., 2017; Vasan et al., 2014). This is the driving force behind the formation of IHSDN (PAHO, 2011) and the emphasis on assuring people have access to a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation, and end-of-life care at the different levels and sites of care, and according to their needs throughout their life cycle (WHO, 2015).
- 3.33 **Healthcare services organized in integrated networks exhibit good quality, timeliness, efficiency, and better health outcomes.** Typically, integrated healthcare networks will organize multi-disciplinary teams of health professionals to work with a defined population. Teams then identify, follow and treat health conditions, working with families and communities to improve health-related behaviors, prevent illness, and manage chronic conditions (Mascia et al., 2015; McCabe et al., 2013). Integrated health service delivery networks are difficult to organize and manage yet, where reforms have succeeded, performance has improved. In Costa Rica, five years after introducing integrated primary healthcare networks, infant mortality declined by 13% and adult mortality by 4% (Rosero-Bixby, 2004; Rosero-Bixby, 2004). In Brazil, evaluations of the Family Health Program have also demonstrated significant improvements in health outcomes (Macinko et al., 2017). Between 2014 and 2018, the City of Bogotá successfully integrated healthcare services (*Red de Salud Distrital*). After strengthening primary care services, rationalizing hospitals, and reforming management, it was able to document improved health outcomes, fewer unnecessary hospital admissions, and a lower financial deficit (Alcaldía de Bogotá, 2019).

c. Managing hospital and network costs

- 3.34 **Preventing illness and managing conditions outside hospitals improves health and reduces costs.** Through integration or other coordination mechanisms, patients can be directed to the most suitable providers for each condition, avoiding unnecessary hospital admissions and improving pre- and post-hospital care. This process reduces demand for beds, duration of hospital stays, hospital-acquired infections and readmissions due to complications (La Forgia & Harding, 2009). Outpatient surgery utilizing less invasive techniques and improved anesthetics have improved patient safety and health outcomes and can also reduce the unit cost of interventions. Relatively complex procedures can also be moved out of hospitals for more appropriate care in outpatient centers (see Box 3).

Box 3. Better care at lower cost with dedicated outpatient centers

Chile has created *Centros de Diagnóstico y Tratamiento* (CDT) which provide high complexity services without requiring patients to stay overnight, including advanced imaging and diagnostics, various forms of specialized treatment, and certain types of surgery. Chile also has *Centros de Referencia de Salud* (CRS) that operate like a CDT but for less complex services involving pediatrics, internal medicine, and obstetrics. In this way, patients can be treated at a range of institutions to match the varied character and complexities of conditions—whether in a primary care facility, a CRS, a CDT, or any of the different levels of inpatient hospital complexity (Gonzalez et al., 2019; Ministerio de Salud (Chile), 2019).

- 3.35 **The region's hospitals need to be reconfigured due to changing demands.** Due to demographic trends, LAC will need fewer obstetric and pediatric wards with low complexity care and more capacity for complex treatment of adults. More frequent natural disasters associated with climate change and epidemics will require hospitals that are resilient, function reliably under adverse conditions, and reallocate beds and equipment in the face of rapid changes. Prehospital trauma systems with well-equipped transportation, trained medical responders and efficient forms of communication and data processing will be critical, too, and have been shown to reduce mortality (Henry & Reingold, 2012).
- 3.36 **Infrastructure investment can address these changing demands sustainably.** Even before COVID-19, the region's health infrastructure was relatively old, poorly maintained, and periodically overwhelmed by epidemics, such as dengue. For the region, an estimated US\$153 billion in investment is required to rebuild or construct new hospitals (about US\$102 billion) and PHC facilities (about US\$20 billion), and purchase associated medical equipment (about US\$31 billion). This capital investment is about US\$250 per capita and may be justified if it is part of a broader improvement in management, leading to better quality services. Infrastructure improvement and construction creates opportunities to build structures with bioclimatic principles, energy and water efficiency measures, and construction materials that reduce environmental impact and operating costs. For example, operating savings from energy efficiency for new infrastructure ranges from 20% to 50% depending on the type of facility (Fischel et al., 2020). It also creates opportunities to make buildings resilient to natural disasters and flexible in responding to emergencies (Barandiarán et al., 2019).
- 3.37 **Maintenance is key to sustainable health infrastructure;** yet it tends to be underfinanced. Effective maintenance directly affects patient satisfaction and health. It also affects the return to initial investments by prolonging the usable life of facilities and lowering operating costs. Annual funding on the order of 2% of construction value and 7% of equipment costs are reasonable guides, but funding alone is not enough. These costs need to be considered when planning new investments ("whole lifecycle cost"), including the maintenance and upgrading of complex technologies, and should take advantage of economies of scale when possible by maintaining multiple facilities with a central skilled cadre or private maintenance contract. In this regard, countries are seeking the right mix of maintenance conducted by public employees and private contractors. Brazil, Chile, Mexico, Peru, and Uruguay have all improved maintenance by using Public-Private Partnerships (PPPs). As new technologies and complex equipment are installed, the role of external maintenance contracts is likely to increase.
- 3.38 **Efficiency improvements are possible in many parts of healthcare service delivery.** Well-managed healthcare services can spread the fixed costs of administration, diagnostics, transportation, and other support services across a larger number of facilities. For example, geographically concentrating blood banks can improve service quality while reducing costs. Nicaragua moved to 100% voluntary donations and increased blood collection by over 20% in four years by consolidating blood processing in two centers (Berrios et al., 2013). Logistics can also be managed more efficiently; for example, Peru's *EsSalud* introduced a "just-

in-time” model for its inventory of drugs and supplies, maintaining its output of health services while saving US\$9 million a year (Gertler et al., 2018).

d. The private sector

- 3.39 **The private sector has a critical role to play in achieving UHC.** The private sector—for profit and nonprofit—is a major part of healthcare in every country; however, its scope, activities, and integration with public financing and policies vary substantially across systems. Its main roles are: (i) supplying inputs; (ii) providing publicly financed services; (iii) providing private management for public services; and (iv) competing with public services for paying (or insured) patients. In every country, the private sector plays a role in manufacturing, marketing, and distributing medical supplies, pharmaceuticals, and equipment, as well as engaging in construction and sometimes defined management tasks—even where healthcare services are exclusively provided by public employees in publicly-owned facilities. In other countries, private healthcare providers are an integral part of publicly financed well-regulated healthcare systems as different as Japan, Canada, Israel, and Switzerland. In these systems, everyone has access to the same healthcare providers at reasonable cost whether the providers are publicly or privately owned.
- 3.40 **In most LAC countries, private sector providers are not integrated into the UHC architecture;** rather they provide healthcare services to both rich and poor households for whom publicly financed care is considered low quality or inaccessible. Approximately, one-third of the region’s healthcare services are provided by private healthcare providers who primarily charge patients out-of-pocket (Montagu & Chakraborty, 2020). The exceptions are countries like Chile, Colombia, and Uruguay where regulated private providers serve patients within publicly financed systems, or Brazil where the public health system purchases services from private healthcare providers and contracts with social health organizations (*Organizações Sociais de Saúde*) to deliver services for the public sector or to administer public facilities (Coelho & Greve, 2016; Ramos & Seta, 2019; Silva et al., 2016). Thus, public policies have to have a strategy for the private sector: either encompass it within the publicly financed architecture of UHC or improve the quality and accessibility of public services so that people prefer public healthcare and stop paying out-of-pocket for private healthcare.
- 3.41 **Public-Private Partnerships (PPPs) appear to be cost-effective instruments of public policy.** PPPs differ from contracting or purchasing because they typically redistribute management risks and often involve long-term relationships. When adequately structured and implemented, these schemes can increase the cost-effectiveness of investments, contribute to technological innovation and/or improve the availability of technologies that meet the health need of a specific population. Whether for clinical or non-clinical services, a large part of the savings is achieved through competition in the tendering process which requires well-structured contracts that take profitability into consideration. Currently, 26 PPP contracts are operating in the region, with another 18 being developed and 40 under consideration. Health facilities using PPPs in Chile cost 22% less than traditional construction contracts and were completed 35% faster. These PPPs also included private management of support services such as cleaning, food, and security at a savings of 9% to the government (Saint-Pierre C et al., 2017).

3.42 **Public-private engagement requires strong public sector capacity.** To be successful, sector-specific regulations and standards for providing services must be clear, with explicit provisions for private participation and delineation of responsibilities. To contract the private sector or engage in PPPs, the government needs the capacity to plan, design, negotiate, and enforce good agreements (Jomo et al., 2016). Agreements need to be transparent, with accountability mechanisms to assure that the contracts between public agencies and private firms are serving the public interest. To preserve fiscal sustainability, the state should also take into account the long-term fiscal impact on the government budget of PPP projects in all sectors (Romero, 2015). Value for money assessments can help decide whether a PPP approach is appropriate for a given project (Roehrich et al., 2014). Finally, the private sector partner's experience, trustworthiness, and technical and financial capacity are also important in having confidence that they will comply with contractual obligations and meet the target performance standards (IDB Invest, 2019).

e. Regional integration and coordination

3.43 **Many parts of healthcare service delivery can benefit from economies of scale that transcend national borders.** Standardized approaches to approving and licensing medications and equipment can reduce costs. By pooling resources, countries could also improve the quality of evidence used to make such decisions. For countries with limited specialists or imaging services, approaches to cross-border telehealth could be a cost-effective way of expanding access to important but less common healthcare services. Coordination on building public health infrastructure—such as diagnostic laboratories—and data reporting standards will improve epidemiological surveillance and responses to public emergencies. Regional efforts are also required to address infectious diseases such as dengue, chikungunya, and malaria. For example, the Regional Malaria Elimination Initiative (RMEI), coordinated by the IDB Group, is supporting national plans for malaria elimination that target more than 250 active foci—many of which are along border areas in the Mesoamerica region and on the island of Hispaniola.

4. Human resources³⁰

3.44 **Progress toward UHC requires greater investment in human resources.** Without adequate policies and funding for human resources, other investments in the health system cannot achieve their goals. Progress toward UHC requires sustained efforts to match formal education, professional training, and in-service training with financial programming, organizational reforms, digital health strategies, and other aspects of health sector operation (Arroyo et al., 2011; Aspiazu, 2017; M. R. Dal Poz et al., 2015; Murphy et al., 2016). To develop appropriate strategies, countries need better information about people working in the health sector and their working conditions, and the capacity to project, plan and manage a national human resource development strategy (M. Dal Poz et al., 2019; Murphy et al., 2016). The shift towards integrated patient-centered healthcare requires adjustments in the education, training, allocation, and

³⁰ The WHO defines human resources for health as: "all persons involved in activities whose intention is to improve health" and includes those who provide the services (doctors, nurses, midwives, dentists, community workers and workers social), as well as those who are responsible for directing and organizing the operation of the health system such as managers, administrators or managers.

management of healthcare personnel (Nigenda et al., 2013; Talbot et al., 2009) and the shifting burden of disease requires more medical personnel trained to diagnose and treat NCDs (Doubova et al., 2020; Mathew A., 2018).

- 3.45 **Training, working conditions, and alternative employment affect healthcare worker productivity.** Recruiting sufficient health professionals for the public sector is difficult. In some cases, the number of graduates from formal training institutions is limited—often due to insufficient investment in formal training institutions and sometimes because medical specialties prefer to restrict the supply of potential competitors. In other cases, graduates of formal training lack the necessary technical profiles. In some countries, potential recruits are discouraged by low pay rates, poor facility conditions, or isolated postings. Women comprise the majority of health workers (e.g., more than 80% of nurses are women, see [Figure 39](#)), so that their recruitment, promotional opportunities, and working conditions deserve particular attention. Where women bear the disproportionate burden of caregiving for children and the elderly, the availability of affordable high-quality care options are important to sustaining their wellbeing and productivity. Finally, well-trained healthcare professionals often have alternative employment opportunities in the private sector. Dual practice arrangements in which doctors and nurses hold posts in the public sector while maintaining private practice are common, even when they are not formally authorized (Russo et al., 2018). In general, dual practice contributes to health sector fragmentation, does not seem to improve quality or safety of patients, and may increase absenteeism from public sector posts (Alaref et al., 2017; Chaudhury et al., 2006; Khim et al., 2020; Moghri et al., 2016).
- 3.46 **Reorganizing the skill mix increases the effectiveness of care, patient safety, and productivity.** Instead of using highly skilled people to perform simple and routine tasks, shifting tasks to less skilled workers or creating entirely new skill categories can assure better care and reduce costs (Tsolekile et al., 2015). Task shifting has shown favorable outcomes in interventions such as access to maternal and newborn health services in countries with scarce resources (Floyd & Brunk, 2016), in the more effective administration of antiretrovirals for HIV-AIDS (Mdege et al., 2012), and in boosting productivity in the management of patients with chronic diseases such as hypertension (Joshi et al., 2014). The ratio of nurses to doctors varies significantly across countries (Robles et al., 2019), suggesting that the workforce could be deployed more efficiently by considering the relative costs and benefits of different recruitment and task distribution strategies.
- 3.47 **The health sector needs skilled professionals working in multidisciplinary teams.** Health service delivery is more effective and more focused on patient outcomes and safety when work is carried out by teams composed of people with different professions (Cumin et al., 2016). Collaboration among physicians, nurses, nutritionists, clinical assistants, and community health agents raises productivity by promoting better care based on a high-quality primary care model. Patients with chronic diseases and older adults particularly require the attention of interprofessional teams that work in coordination (Pérez-Cuevas et al., 2015).
- 3.48 **The health sector needs skilled professionals of many kinds.** Human resource policies have focused almost exclusively on recruiting medical professionals, but an effective health sector requires highly skilled analysts, managers, planners,

administrators, communicators, and information technology experts, too (Nutley & Reynolds, 2013). People working in the health sector need to work with a wide range of technologies, such that positions like chief technology officer, chief privacy officer, chief transformation officer, and chief medical information officer have become essential staff positions.³¹

- 3.49 **Digital tools work when healthcare personnel know how to use them.** Physicians who use telemedicine have shown shortened diagnosis time, faster and better patient management, improved accuracy of triage, increased confidence, and reductions in unnecessary procedures (Deldar et al., 2016). The COVID-19 pandemic has expanded the use of telemedicine for physicians to communicate with patients; and many countries, including Argentina, Peru, and Uruguay, have waived restrictions or simplified procedures to permit wider use of this technology. Digital tools to help providers follow medical protocols, make clinical decisions, and interpret medical images are also available to augment their abilities, not to replace them. However, this requires appropriate training (Fazal et al., 2018; Labrique et al., 2013; Moja et al., 2014).

5. Medical supplies, diagnostics, equipment, and pharmaceuticals

- 3.50 **Medical inputs are a significant and growing component of health spending.** Medical inputs—which include diagnostics, drugs, devices, and consumable supplies—are a large part of recurrent spending. They account for 23% of total health expenditures in low-income countries; 20% in lower-middle income countries; and 16% in upper-middle income countries (Rosen & Tordrup, 2018). In LAC, spending on drugs ranges from 14% of total health expenditure in Brazil and Colombia to almost 23% in Argentina (see Figure 35). Medical inputs and their associated services also contribute from 25% to 75% of health expenditure growth (Fan & Savedoff, 2014; Sorenson et al., 2013). The extra cost may be justified by more than proportional improvements in health; but in many cases, the extra cost has limited or no additional health benefits (Glickman & Weiner, 2020).

a. Purchasing medical inputs

- 3.51 **When governments purchase medical inputs, they can often obtain the same health gains at lower cost** (OECD, 2017).³² For example, many countries pay for treatment with insulin glargine despite evidence showing it is equivalent in effectiveness to human insulin and costs twice as much (Hua et al., 2016; Machado-Alba & Medina-Morales, 2016; Pinto et al., 2019). By contrast, countries like the United Kingdom and Germany have more money available to spend on other health needs because they recommend human insulin as a first line of treatment (Pinto et al., 2019).

- 3.52 **Many tools exist to improve the efficiency of medical input procurement.** These include competitive procurement procedures when multiple suppliers exist;

³¹ PAHO's Information Systems for Health (IS4H) framework (PAHO, 2020b) includes tools to conduct a functional analysis (PAHO, 2018) and [IS4H roles](#) for getting started in digital health in LAC; the *Centro Nacional de Sistemas de Información en Salud (CENS)* in Chile (retrieved from <https://cens.cl/capital-humano/>, accessed June 17, 2020) has also proposed key competencies and labor profiles for health informatics.

³² Most of this literature focuses on efficient purchasing of pharmaceuticals. The markets for diagnostics, medical devices, and medical supplies vary considerably, but similar issues arise when seeking to improve value for money in health.

negotiations to assure products are cost-effective with one or very few suppliers; and establishing positive or negative lists that determine which medical inputs will be financed or reimbursed by public funds. Most middle and high-income countries have explicit priority-setting approaches to procurement or explicit health benefit plans aimed at allocating public resources to more effective interventions (Cotlear et al., 2015; Giedion et al., 2014). PPPs can be an alternative to procure, operate, and maintain sophisticated medical devices. These schemes allow the public and private sector to share the costs and risks that arise during a medical device's life cycle (IDB Invest, 2019; WHO, 2012).

- 3.53 **Health Technology Assessments (HTA) promote better health at lower cost.** HTAs assess the benefits of medical inputs relative to their costs; sometimes incorporating criteria such as equity and financial protection; and building their legitimacy through open, transparent, deliberative processes (Giedion et al., 2018; Pinto et al., 2019). A survey of 21 countries in the region showed that 11 have a public health technology assessment body, while 17 report having performed some HTA activities (Castelli et al., 2020; Lessa & Ferraz, 2017) (See [Table 16](#)). Research on LAC and OECD countries found that HTA use had the most robust and positive impact on health system efficiency compared to other institutional factors (Castelli et al., 2020). Countries including Australia, the Netherlands, and Canada have linked drug prices to HTA results, an approach that has evolved into “value based pricing” which negotiates prices on the basis of the expected health benefits (Claxton et al., 2008; Hwang et al., 2017). Innovations such as “health outcomes-based contracts” go a step further, with drug manufacturers refunding some or all of the cost if health benefits are not achieved (Comer, 2019).

b. Regulating medical input markets

- 3.54 **Most medical inputs are bought and sold in imperfect markets.** Medical input markets are full of problems related to unobservability of quality and uncertainties in effectiveness. Medical input markets are often thin for products associated with relatively rare illnesses; and monopolistic when products are under patent, lack close substitutes, or entail high fixed entry costs. Many factors can explain price and quality variation including effective demand; the number of purchasers, the types of purchasers (e.g., public agency, individual with out-of-pocket spending, or health insurer); the types of procurement mechanisms used by buyers (e.g., competitive, direct purchase); patent and regulatory policies; and supply-side factors, such as market concentration, marketing strategies, and the availability (or lack) of close substitutes (Dubois et al., 2019; Keller & Savedoff, 2019; Rosen & Tordrup, 2018). These elements are key to formulating policies to get better value for money while paying attention to the impact on incentives for research, development, and manufacturing.

- 3.55 **Increasing competition and aggregating demand can reduce prices.** Purchasing generic products in competitive markets may be the single most important policy for limiting health system costs (WHO, 2010b) and governments can promote healthy competition in the generic market by encouraging entry by new firms through favorable regulations, incentives, quality assurance mechanisms, and efforts to improve the acceptability of generics among clinicians and the public (Rosen & Tordrup, 2018). Transparency can improve competition because when suppliers view procurement processes as fair, they are more likely

to participate in bids (Berdud et al., 2019; WHO, 2016). Governments can also negotiate better prices for medical inputs by combining the purchases of multiple buyers which reduces transaction costs, achieves economies of scale, and obtains unit-cost savings from sellers who prefer large-volume transactions (Bañuelos, 2016; Dubois et al., 2019; Rosen & Tordrup, 2018). The Pan-American Health Organization (PAHO's) Strategic Fund and the Pharmaceutical Procurement Service of the Organization of Eastern Caribbean States (OECS) are examples which aggregate demand across countries (see Box 4).

Box 4. Cross-Country Group Purchasing Organizations

PAHO's Strategic Fund, created in 2000, provides pooled procurement options for an array of medicines and other supplies, such as diagnostic kits and mosquito nets, and aims to achieve a single price for all its members. In 2018, Mercosur countries³³ obtained substantially lower prices by making joint purchases through the Fund; for example, [paying 70% less for Tacrolimus, an immunosuppressant](#). The Fund also has a mechanism in place to allow countries to purchase supplies quickly during emergencies or in the case of stock-outs.

The Pharmaceutical Procurement Service of the OECS has been purchasing health products on behalf its 10 member states since 1986. It has 840 items in its portfolio, including pharmaceuticals, medical supplies, contraceptives, and radiological services. According to the OECS, the mechanism has consistently achieved annual cost savings of about US\$4 million (SERCOP, 2015).

Similarly, the Council of Ministers of Health of Central America and the Dominican Republic (COMISCA) negotiates prices on behalf of eight countries which then purchase directly on their own behalf. COMISCA focuses on high-cost pharmaceuticals for chronic diseases and achieved US\$25 million in savings in the joint negotiation of 38 medicines with 10 pharmaceutical companies during its first 5 years (SERCOP, 2015).

6. Digital health

- 3.56 **Digital health is useful when it is part of the healthcare management and delivery system** (See Table 12). One of the most important pillars of digital health is an Electronic Health Record (EHR) System paired with Health Information Exchange, so that clinical information can be shared at the individual level in a safe and secure way across public and private providers (Nelson et al., 2020). When integrated with healthcare processes, EHRs can improve diagnostics, reduce medical errors, increase productivity, and save patients' time, while providing data for public health surveillance. It can also support cost analysis and/or service billing because it contains data on individual level procedures and effectiveness of treatment if paired with patient outcomes (Baum & Giussi, 2019). Digital health has other benefits, too; for example, replacing physical visits with remote consultations can generate significant reductions in carbon emissions (Keshvardoost et al., 2020).
- 3.57 **Digital transformation requires more than buying software and computers.** Patients, medical providers, and managers all need to have confidence in digital technologies, find them easy to learn and use, and experience them as beneficial if they are going to adopt them. On the supply side, successful digital transformation requires a pro-active, holistic, long-term strategy for: governance and management of digital health transformation; infrastructure; infostructure and standards; health processes and information components; people and culture; and

³³ Southern Common Market, whose members are Argentina, Brazil, Paraguay, and Uruguay.

knowledge management & information use. Digital transformation also requires initial investments and an ongoing commitment to finance maintenance, regardless if systems have open source or proprietary licenses (Blaya & Ozoy, 2019). Governance roles and responsibilities within the Ministry of Health and involving multiple other stakeholders must be clear, along with regulations that establish what is required of private firms so they can participate in the market in full compliance with laws. Also, key policies need to be adopted to permit the use of EHRs, international interoperability standards (Luna et al., 2019), protection of privacy and confidentiality, cybersecurity and the use of electronic prescriptions, telemedicine, and digital signatures.³⁴

- 3.58 **Digital health cannot function without strategic investments in policies, standards, and infrastructure.** First, countries need a national digital policy framework within which sector agendas –like digital health– can be aligned. The national policies guide infrastructure investments and platforms more generally while the digital health policies guide investments specific to healthcare services and public health. Digital health also requires investments in “Infostructure”—the development of syntactic and semantic interoperability of the healthcare organization system, including key registries, identifiers, and software that permit the safe and secure exchange of health information. The region also needs to prepare for data exchange between countries given the high level of migration and the potential to leverage resources and explore transnational telehealth and tele-diagnostic abilities. Investments in basic connectivity are also needed; many health centers and hospitals lack the internet access necessary to use digital health tools. In Brazil, all public health facilities have internet connection via cable/optical fiber or DSL; compared to 89% in Uruguay, and only 17% in El Salvador (see [Table 14](#)).
- 3.59 **Digital health can reduce inequities, but only if policies address the digital divide.** Digital health has been used effectively in high-income countries to extend services and improve healthcare for rural and disadvantaged populations (Marcin et al., 2016; Ray Dorsey & Topol, 2016); and Peru successfully implemented a special telehealth program to reach people with disabilities in areas with high concentrations of COVID-19 cases. Nevertheless, evidence on the net impact of digital health in developing countries is limited (Scott & Mars, 2015). To be inclusive, countries will have to reduce the digital divide: twice as many top income quintile households have internet access as the poorest income quintile in Costa Rica, Chile and Uruguay, and this ratio is greater than 20 to one in Paraguay and Peru (ECLAC, 2017).

7. Governance

- 3.60 **Progress toward UHC requires good governance led by the public sector.** The previous sections—discussing social and environmental determinants of health as well as healthcare service functions—describe health system elements that are needed to confront the three challenges facing the region: changing disease

³⁴ See American Cooperation Network for Electronic Health (RACSEL). (<http://socialdigital.iadb.org/en/resources/toolkits/271>, accessed June 17, 2020) SPH's Digital Health Normative Map (<http://socialdigital.iadb.org/en/resources/multimedia/4119>, accessed June 17, 2020); along with Annex II, Table 13 for a complete list of domains, and PAHO's Information System for Health Maturity Model (<https://www.paho.org/ish/index.php/en/maturity-model>, accessed June 17, 2020).

burdens, fiscal and financial pressures, and low productivity and poor-quality healthcare services. But the health sector does not naturally self-organize to achieve financial sustainability and equity. Rather, active public policies are needed to solve problems associated with poor information, weak observability of performance, and accountability if this sector is going to achieve its social goals.

- 3.61 **A well-governed system is accountable for performance.** Every social system is accountable for something, but not always for its stated purpose. While healthcare systems are meant to improve health and provide financial protection from high medical costs, they are also pressured to generate employment, incomes, sales, opportunities for patronage and favors, and sources of prestige and power. Thus, progress toward UHC requires not only that healthcare systems become more accountable, but that they become primarily accountable for progressing toward UHC. One of the greatest obstacles to health reforms lies in the political power of those who resist change because the current system serves them reasonably well. By contrast, people who would benefit most from reforms either lack political power or find it difficult to organize and mobilize to promote change (Olson, 2007; Reich et al., 2016).
- 3.62 **Accountability and transparency are critical to good governance for the entire health sector.** Making health system actors accountable for UHC goals is a way of making both public and private providers accountable to the population, with the government responsible for establishing standards for quality and transparency. Governments, in turn, must be accountable to citizens for fulfilling this responsibility. By generating and disseminating performance information (transparency) and building feedback mechanisms with rewards and sanctions for performance (accountability), governments can create a system that encourages actors—from healthcare providers and insurers, to patients and pharmaceutical firms—to make decisions that yield better outcomes (Brinkerhoff & Bossert, 2013; Greer et al., 2016; Siddiqi et al., 2009).
- 3.63 **Corruption undermines progress toward UHC and creates a crisis of legitimacy.** The health sector is particularly vulnerable to corruption because of: (i) the amounts of money involved; (ii) the large number of dispersed actors making decisions that require judgment and discretion; and (iii) uncertainties and informational constraints which make it difficult to determine whether corruption actually occurred (OECD, 2017; Savedoff & Hussmann, 2006). In a 2017 survey of LAC countries, 20% of those who needed public hospital services in the prior 12 months said they had paid a bribe—more than for any of five other key public services (Transparency International, 2017).³⁵ Though action against systemic corruption must be systemic, more limited actions can also make a difference, such as cash register controls; publishing prices paid by public facilities; and publicizing “No Bribe” policies (Vian et al., 2010).
- 3.64 **Good health sector governance establishes comprehensive policies for both public and private actors.** This includes establishing the same healthcare quality standards for all providers and regulations to assure health financing institutions promote the goals of UHC. For example, Chile’s *Superintendencia de Salud* has authority to regulate the public *Fondo Nacional de Salud* (FONASA) and private

³⁵ Followed by schools (18 %), obtaining identification (17 %), police (16 %), utilities (14 %), and courts (12 %).

Instituciones de Salud Previsional (ISAPRES); and Brazil has a specific agency, National Agency of Supplementary Health (*Agência Nacional Saúde*), to regulate private insurers. Public sector policy to discourage excess use of antimicrobial drugs which lead to the common threat of drug resistance or excessive cesarean sections which raise health risks for women giving birth need to apply to both public and private providers. Public health authorities in conjunction with agencies responsible for encouraging economic activity and discouraging anti-competitive behaviors can monitor and regulate the markets for medical inputs in ways that assure competitiveness and increase efficiency of private markets supplying the health sector.

- 3.65 **Countries with decentralized public health systems face distinct challenges and opportunities.** When subnational authorities have important responsibilities for healthcare services, it can be difficult to coordinate national public health responses—as has happened during the COVID-19 pandemic. Typically, subnational authorities vary in their capacity and resources to carry out their health sector functions, leading to geographic inequities. Subnational jurisdictions with relatively small populations are also at a disadvantage in terms of pooling risk when compared to larger jurisdictions. Well-governed decentralized systems clearly divide responsibilities among different levels of government, assure financing commensurate with those responsibilities at each level, and provide support to build local capacity (Abimbola et al., 2019; Klein et al., 2017).
- 3.66 **Good governance involves planning and preparedness.** The COVID-19 pandemic has revealed weaknesses in health systems all over the world, but the countries who fared best are those that institutionalized emergency preparedness plans after the first SARS epidemic in 2003 (i.e., New Zealand, Singapore, South Korea, among others). The speed with which these countries-initiated non-pharmaceutical interventions, testing, tracing, treatment and isolation protocols, and effective public communication demonstrated that a prepared health system can be an effective health system. The elements of effective Emergency and Disaster Risk Management systems are well-established in numerous guidelines from WHO, Centers for Disease Control and Prevention (CDC), ECDC, and others, and the financial costs are low—annual recurrent costs per capita are estimated at US\$4.16 for low-income countries and US\$1.41 for middle-income countries (see [Box 2](#)) (Peters et al., 2019).

8. Information and knowledge gaps

- 3.67 **Applying existing knowledge could improve health throughout the region, still big questions remain.** The evidence presented here shows how LAC countries could prevent illness, save lives and limit health spending by acting on knowledge about reducing health risk factors, allocating resources toward cost-effective interventions, integrating healthcare service delivery, reducing fragmentation in health financing, and improving governance, among others. However, this review of evidence also highlights six topics on which more research and knowledge could yield substantial benefits.

- a. Quality of healthcare systems and healthcare service delivery
- 3.68 **Knowledge on quality of care has improved but requires attention to systemic factors and measurement.** Studies have demonstrated the impact of low-quality care on health, especially for disadvantaged populations. Increasingly, the field is documenting interventions that improve quality at the facility level and working with frontline staff. Expert reviews have argued that quality interventions need to address the policy level and consider the full range of system functions—among them governance, training, resource allocation, and information feedback loops—that support continual quality improvement (Kruk, Gage, Arsenault, et al., 2018; NAS, 2018). Thus, future research needs to: (i) address system level factors that affect quality of healthcare; (ii) develop new forms of measurement required to manage for quality; and (iii) evaluate whether quality responds to system interventions.
- b. Human resources for health
- 3.69 **Knowledge on human resources for health is limited.** Most countries lack basic information about the number of medically trained people in their countries, their characteristics, their working conditions, and their pay. The literature provides some information about the supply of health professionals but tends to analyze demand in terms of idealized population ratios without considering factors such as the effectiveness of training systems, changing skill profiles, changing paradigms for service delivery linked to digital transformation, and employment conditions. Important research gaps for human resources in health involve: (i) evaluating the cost-effectiveness of different approaches to training; (ii) assessing current systems of training in relation to the ability to work in integrated networks, use new technologies, and provide culturally appropriate services; and (iii) analyzing the job market and incentives faced by health professionals working in multiple institutions.
- c. Institutional and financial fragmentation of health systems
- 3.70 **The problem of fragmentation is well documented, but practical guidance on ending it or mitigating its impact is limited** (Bossert et al., 2014; Martínez Franzoni & Sánchez-Ancochea, 2018). Reforms to address fragmentation face resistance due to political, economic, fiscal, and labor market implications. Priority research on health sector fragmentation includes: (i) identifying the potential transition paths needed to reform fragmented health systems; and (ii) identifying and demonstrating the value of policies which can indirectly mitigate the impact of fragmentation through, for example, compensatory funding or regulations.
- d. Financial sustainability and efficiency
- 3.71 **Knowledge about health system financial sustainability and efficiency needs to be linked to policies and practices.** Therefore, future research on this topic should: (i) evaluate the impact of institutional and policy factors that promote health system efficiency and slow health spending growth; (ii) develop systematic approaches to analyzing demographic, epidemiological and healthcare market factors that affect health spending growth; (iii) evaluate operational approaches to improving the health system's administrative, allocative and technical efficiency;

and (iv) study differences between healthcare providers to understand variations in quality and efficiency so as to identify policy levers that improve performance.

e. Digital health

- 3.72 **Knowledge regarding the use of digital health has identified potential benefits and prerequisites.** New digital health technologies arrive every day with many potential benefits. Yet, research has shown a series of preconditions—from infrastructure and connectivity to training and governance—that are necessary for digital health to yield benefits. What is lacking in this research is: (i) evidence on the equitable rollout of digital technologies; (ii) effective implementation strategies; and (iii) costs relative to benefits.

f. Public health preparedness

- 3.73 **Knowledge regarding public health preparedness is highly developed because of previous health emergencies.** Based on the experiences with natural disasters exacerbated by climate change, refugee crises, and especially recent epidemics, the international community knows a lot about public investments in preparedness that can lower the risks of social disruption and mitigate crises. Research gaps remain in: (i) documenting how well countries are prepared for public health emergencies, including better information on International Health Regulation compliance;³⁶ (ii) cost estimates for emergency preparedness and strategies for ensuring stable and sustainable commitments to public health preparedness; and (iii) approaches to incorporating NCDs into public health preparedness, to avoid disrupting care during emergencies, and to address the large impact of comorbidities on the trajectory of epidemics.

IV. LESSONS LEARNED FROM THE IDB GROUP'S EXPERIENCE IN HEALTH

- 4.1 The team responsible for this SFD, in partnership with the Knowledge and Learning Division (KIC/KLD), IDB Invest and IDB Lab, extracted lessons from the IDB Group's experience in health. KIC/KLD contributed by analyzing a sample of IDB Group loans, grants, and technical cooperation operations related to health (see Annex III). That analysis was based on a review of project documentation and interviews with project team leaders. The IDB Group's work in health has focused primarily on policies and programs with the public sector, but activities involving private sector actors have expanded. IDB Lab and IDB Invest provided lessons from the latter. The lessons learned are highlighted below, grouped together according to strategic and thematic features.

A. Strategic lessons

- 4.2 **The IDB Group has learned a lot from operations supporting integrated healthcare service delivery and primary healthcare** in most of its borrowing member countries. These include the importance of: (i) defining clear roles and responsibilities for personnel and facilities; (ii) including activities to encourage

³⁶ Johns Hopkins University has a 3-tier assessment of preparedness relative to the International Health Regulations, but it lacks the specificity required for research or for guiding policies.

patients to seek care at appropriate sites and refer to specialized care if needed; and (iii) establishing clear clinical and managerial procedures, data collection, information sharing, and regular training for staff. Yet progress in the region has been uneven, mostly because integrating healthcare service networks requires substantial political commitment and effective governance arrangements. Without strong consistent leadership, it is difficult to assure the adequate funding, appropriate incentives, standardization of procedures, public communication, procedural coordination among network nodes and alignment of difference governance levels that are necessary for successful network integration.

- 4.3 **Lessons have also come from operations that promote adaptive problem-solving processes.** For instance, operations that implemented continuous quality improvement interventions regularly collected and analyzed information related to service targets, performance, and quality; and shared it among providers and administrators throughout the network. Consequently, this gave healthcare providers the opportunity to identify ways to improve services, and managers an essential tool for planning and coordination. These principles of adaptive learning can be used strategically to improve other aspects of the health system. Operations which use pay for results mechanisms have complemented this adaptive learning approach by promoting better measurement and enabling problem-solving responses to those indicators of performance. These approaches have been applied in a relatively small share of operations and, along with other approaches like social innovation, could be more consistently and systematically used throughout the IDB Group's portfolio in health.
- 4.4 **Recognizing the importance of financial sustainability and fiscal pressures, the IDB Group has promoted greater efficiency to slow health spending growth through improved allocation of resources:** (i) toward cost-effective services; and (ii) to vulnerable populations. The IDB Group has worked with most borrowing member governments on analyzing and promoting cost-effective budget decisions; and developed analytical tools, guides, and training to support the implementation of health technology assessment. It has learned that without sustained engagement, these criteria and instruments may not be institutionalized as regular elements of health sector policy decisions. The IDB Group has also worked with most borrowing member countries to increase efficiency by allocating spending to underserved populations who often live in rural or peri-urban areas. Analytical work can alert governments to deficiencies in spending on these vulnerable populations, but continued engagement is needed to promote adequate funding for the capital and operational costs of healthcare providers serving these groups. Sustaining such reallocations is a continual challenge in the face of fluctuating public revenues and many pressures from inside and outside the health sector to influence government budget allocation decisions. Technical assistance at the subnational level has also been critical to improve local healthcare service management to improve access and quality. Allocating adequate healthcare resources to vulnerable populations is particularly urgent because they face greater economic hardship and risks of infection and death from COVID-19. In the medium term, fiscal consolidation due to the economic crisis will require prioritizing public expenditures through both a cost efficiency and an equity lens.

- 4.5 **The IDB Group has also supported country efforts to address financial sustainability through improved planning, purchasing, and management.** Through policy dialogues based on analytical studies, the IDB Group has demonstrated how operational and maintenance cost data can improve investment decisions and planning for future recurrent budgets. The IDB Group has supported improvements in health sector spending through technical assistance for consolidated procurement processes, both at the national level and through regional institutions such as COMISCA for a range of medical inputs; and the Caribbean Public Health Agency (CARPHA), COMISCA, and PAHO for responding to the COVID-19 pandemic.
- 4.6 **The IDB Group has collaborated in regional initiatives and partnerships that multiply the effectiveness of operational and technical support.** Unlike conventional operations in a single country, initiatives like the Mesoamerican Health Initiative (MHI) and the RMEI work with a common team and methodology in several countries around a common objective to support multiple operations. This regional work facilitates cross-country comparisons, professional development, and professional networking. Sharing indicators among countries has promoted a culture of accountability and peer support that motivates change (El Bcheraoui et al., 2017; Rios-Zertuche et al., 2018). These initiatives are structured as partnerships between the participating countries, the IDB Group, and public and private donors. Both partnerships include the Bill and Melinda Gates Foundation, and the Carlos Slim Foundation. In addition, MHI has been supported by the governments of Spain and Canada; and RMEI has received funding from the Global Fund to Fight Aids TB and Malaria. Regional and technical partners include PAHO and CCOMISCA, among others. While negotiating such arrangements can be difficult, staff and counterparts appreciate how these partnerships strengthen accountability, obtain high-level managerial attention, and gain access to diverse technical and managerial expertise. Success in such initiatives—that pursue medium term results (e.g., malaria elimination)—requires all parties involved to keep a steady focus on the objective and to manage institutional contexts which are often volatile.

B. Thematic lessons

- 4.7 **The IDB Group has supported a widening range of programs to address issues of gender.** The IDB Group has promoted women's health through attention to improving access to maternal and reproductive health services in almost every borrowing member country. Many of the lessons from building integrated networks based on primary healthcare are derived from these very projects. To mainstream gender equality across its portfolio, the IDB Group expanded its work to encompass women's, men's, and adolescent's sexual and reproductive health and increasingly to support: (i) prevention and response to violence against women; (ii) early childhood development (ECD), including active parent participation; (iii) care services for dependent people, including the promotion of co-responsibility and the professionalization of care; and (iv) positive youth development, including prevention of teenage pregnancy. One of the main lessons that has emerged from these operations is that programs are more successful at reaching women and empowering them when explicit mechanisms are created for representation in decision-making and supervisory roles; when gender issues are addressed in health staff training; and when specific programs are incorporated

into screening, counseling and referral protocols. The IDB Group has also learned that improving coverage can require differentiated care paths by gender, especially in terms of NCD screening and management along with gender differentiated approaches through behavioral interventions to encourage men as well as women to seek preventive care services. Scaling up some of the lessons learned from pilot behavioral interventions may help to expand the effectiveness of a wide range of projects focusing on prevention but more needs to be done in this respect.

- 4.8 **The IDB Group has experience with a growing number of programs to address cultural diversity and inclusion of people with disabilities.** An important lesson from cultural diversity activities is to use qualitative operational studies, in-depth interviews, and social networks analysis to understand values, culture, and world views in ways that make healthcare services more welcome, appropriate, and effective at providing good quality care. Specific measures have included changing facility designs, hiring staff with appropriate language skills, improving communication, engaging with indigenous authorities, and aligning healthcare practices with community worldviews. Additionally, technical training and management workshops on adapting clinical processes and learning from communities have helped close cultural gaps and made services more inviting. Interventions to include people with disabilities are distinct and involve reducing barriers to access, early identification of disabilities, and rehabilitation. The IDB group is learning from innovative operations removing barriers to access to healthcare services for people with disabilities in Colombia, Ecuador, and Panama; and from operations financing accessible infrastructure in Argentina, Guatemala, Panama, and Paraguay, among others.
- 4.9 **Digital health is increasingly important to the IDB Group's support for health in the region.** The IDB Group has developed a comprehensive understanding of issues related to infrastructure, ethics, equity, behaviors, cybersecurity, and governance which affect how technologies can be successfully adopted and subsequently improve health.³⁷ The IDB Group has learned that digital health initiatives progress well when governments begin by establishing certain foundations related to governance, standards, cybersecurity, and eHealth architecture, as well as training and recruitment of appropriate IT personnel (see [Figure 44](#)). The IDB Group has demonstrated the value of these investments and of following internationally recognized digital health principles through technical support, guidelines, and webinars. This was evident in the first months of the COVID-19 pandemic, when the IDB Group provided both unbiased access to information on available digital solutions through an [online platform](#); and guidance to team leaders and country counterparts with regards to critical issues related to governance and confidentiality. It also worked with countries to support contact tracing and case management strategies and telemedicine solutions. The IDB Group has seen that partnering with other institutions builds greater legitimacy and effectiveness. The IDB Group's partnership with PAHO has aligned the learning and support agenda of both institutions, making it possible to develop diagnostic and planning tools collaboratively. Countries get clear consistent advice at the regional level and access to tailored technical support, as is currently underway in Argentina, Ecuador, Honduras, Jamaica, Paraguay, Peru, and Suriname. In some countries, a limited cadre of trained human resources has been

³⁷ IDB EHR Maturity Model, 2019.

an obstacle to achieving faster progress; therefore, future support will need to consider human resource training and recruiting within an innovative public sector environment. By supporting cutting edge regional experiences, such as the Innova HC District in Brazil, the IDB Group has also learned the value of promoting robust collaborations between private and public actors where health technology innovations are developed and tested in the public sector.

- 4.10 **The IDB Group has responded to epidemics before, but more substantial and sustained action is needed.** The IDB Group recognizes the comparative advantage of other institutions, and especially PAHO, with respect to expertise, institutional capacity and leadership on issues related to surveillance systems and epidemics, as stated in the 2016 SFD for Health and Nutrition. In line with actions recommended by PAHO, the IDB Group responded to country requests for support during the Ebola and Zika crises. It also provided support for countries to comply with the International Health Regulations (IHR 2005) that were issued in the wake of the SARS epidemic.³⁸ Emergency response capacity within the IHR framework has also been supported by three regional technical cooperation operations addressing vector-borne diseases and tourism. Yet the region's preparedness when COVID-19 arrived was still weak and, recognizing the gravity of the threat, the IDB Group played a prominent role in supporting emergency investments under the technical leadership of PAHO and in coordination with other multilateral banks such as the World Bank and CAF. Before the virus was first detected in the region (February 26 in Brazil), the IDB Group made contacts and prepared internally so that, by March, IDB funds were already procuring supplies through national systems or joint procurement platforms. As of August 31st, more than US\$1 billion had been allocated to the COVID-19 emergency response in health by reprogramming and reformulating existing operations, and by approving new operations, including addressing COVID-19 response and future health emergencies with a newly expanded Contingent Credit Facility.³⁹ The crisis has exposed the weakness of public health functions and emergency preparedness in the region, which the IDB Group should offer to address through future technical work and operational support.
- 4.11 **Projects that pay for results should include support to strengthen management and capacity.** The IDB Group has implemented pay for results programs in many borrowing member countries, most prominently in the MHI and RMEI. Lessons from this work are consistent with the broader literature which shows that paying for results can be successful, but that the selection of indicators, structure of incentives, delegation of authority, and capacity of those receiving payments are important to performance. In IDB Group operations, local technical and managerial capacity has been particularly important for success. Pay for results programs that identify weaker facilities or districts and provide targeted support to improve their capacities in parallel with the introduction of incentives are more likely to succeed. However, this requires a supervision model focused on

³⁸ The specific programs are RG-T2571 (responding to Ebola); ME-T1137 (supporting Mexico's response to AH1N1); RG-T2869 (regional strategic management program for epidemiological emergencies); RG-T2870 (Caribbean compliance with IHR); RG-T2687 (Regional Tourism Health Information Phase I); and RG-T3324 (Regional Tourism Health Information Phase II).

³⁹ Contingent Credit Facility for Natural Disaster Emergencies and Public Health Risks.

capacity building which is time and resource intensive for countries as well as the IDB Group.

- 4.12 **Operational support with strong expertise helps governments succeed.** The IDB Group has expanded its attention to operational support in every health sector operation, yielding lessons that strengthen counterpart capacity and facilitate project execution. For example, contracting specialized agents to manage some of the procurement processes for executing agencies has improved implementation when complemented by agile coordination mechanisms between the specialized agent, the government, and the IDB Group. In a few cases when solid working flows between executing agencies and procurement agents were not established, project execution did not improve, and arrangements needed to be re-assessed and adjusted. Using market analyses and workshops with suppliers that include all parties to approve detailed technical specifications has reduced the risk of vacated processes. Developing in-house expertise has also been an effective way to assist countries implement health sector investments. For example, team leaders for health operations that finance infrastructure and logistics investments have received valuable support from the Social Infrastructure Unit within Infrastructure and Energy Sector (INE) in more than a dozen countries—including during the COVID-19 emergency response—for assessing different construction and tendering modalities; providing technical assistance to counterparts during all the project cycle's phases; managing safeguards jointly with Environmental and Social Solutions Unit (ESG); and including bioclimatic principles, energy efficiency and water saving measures in these projects.
- 4.13 **IDB Group support for private healthcare providers needs strong technical input and strong sponsors.** Private health sector projects tend to be complex to build and operate and thus can be risky to finance. As a result, experienced and financially strong sponsors—who either have the know-how to prevent, or the cash to absorb, potential cost overruns—are critical to ensuring a successful operation. In addition, the most attractive candidates for financing in the health sector have made sustained investments in technology, developing both efficiencies and competitive advantages vis-a-vis their competitors, and expanding the reach and quality of their services. Finally, the commercial risk on private health sector projects tends to be higher when seeking higher social impact. Consequently, IDB Invest may need to seek partners with concessional financing facilities who can take first loss risk in certain private health sector investments. The IDB Group also faces limitations in lending for private health sector operations which are typically financed in local currency to avoid foreign exchange mismatch between project revenues and debt service payments.
- 4.14 **The IDB Group is exploring new kinds of private health sector investments** which support innovation, cost-reductions, or expansion of private sector goods and services, many of them utilized by the publicly financed healthcare systems. IDB Lab has recently accelerated its engagement with the health sector, financing startups and building partnerships to encourage innovative investments in life sciences, medical devices, and digital health. The supply bottlenecks experienced during the COVID-19 pandemic for inputs like personal protective equipment, hospital equipment, and medications or services provided by diagnostic laboratories demonstrate the critical role played by private firms in supplying publicly financed healthcare services with high value for goods and services.

V. LINES OF ACTION FOR THE IDB GROUP'S WORK IN HEALTH

- 5.1 This Sector Framework Document (SFD) proposes that the IDB Group's work in health should support countries that want to accelerate progress toward Universal Health Coverage (UHC). Based on the diagnostic assessment presented in Section II, the literature review in Section III, and the lessons learned documented in Section IV, pursuing such a goal requires multi-sector action to promote population health; addressing fiscal and financial sustainability by increasing resources for public health and improving its efficiency; and improving the quality of healthcare service delivery particularly for marginal and disadvantaged groups. These three lines of action are proposed as a guide for the IDB Group's operational support which should be tailored to each country through policy dialogues, diagnostic studies, and programming discussions.
1. **Line of Action 1: Multisector action to promote population health**
- 5.2 **Making progress toward UHC will be difficult without addressing major risk factors for poor health.** Many proven cost-effective interventions are available to reduce the regions' top health risks and prevent illness, particularly for lower income and disadvantaged groups, through fiscal policies, laws and regulations, and behavioral strategies (see ¶2.12 and ¶3.2 to ¶3.4). Therefore, the IDB Group will strengthen policy dialogue, knowledge generation, and technical assistance to consolidate information that can improve countries' capacities to design and implement multi-sector policies and programs that improve health, reduce health service demand, and slow health spending growth. These would include policies and programs outside the health sector that prevent illness, such as education and food labelling to improve nutrition, regulations on cigarette sales and restrictions on smoking in public spaces, and policies to reduce environmental contaminants that cause disease. Public policies that address gender inequalities can affect neglected aspects of physical and mental health and reduce barriers to seeking health care services. Other programs outside the health sector can support primary health care programs (see ¶5.8) in screening and prevention of diseases, such as school-based programs to detect mental health issues among adolescents or social programs to detect and refer developmental problems in children.
- 5.3 **Because of the connections between health and other social sectors, mutual support can improve outcomes and efficiency.** Prominent examples of mutual support between health and other social services have involved cash transfers; formal education; early childhood development; long-term care and social support for elderly adults; services to reduce teenage pregnancy; and screening and support in cases of violence against women. The COVID-19 pandemic has also demonstrated crucial roles for social assistance programs in contributing to efforts that slow transmission by, for example, making it possible for infected individuals to self-isolate. Through its operations and technical assistance, the IDB Group will support countries interested in promoting the inclusion of cost-effective health-related services in other social programs. The IDB Group will also address knowledge gaps regarding the linkages between long-term care and health; the effectiveness of health sector interventions in promoting early childhood development; and women's safety and protection against violence; among others.

2. Line of Action 2: Address Fiscal and Financial Sustainability

- 5.4 **Fiscal and financial sustainability require political commitments to increase resources for healthcare services while slowing the pace of spending growth by improving efficiency.** Through policy dialogue and knowledge generation, the IDB Group will demonstrate the value to countries of: more efficient spending; allocating resources to populations that are in greater need; and tools available to choose higher value services and technologies in terms of improving population health. The importance of this technical assistance and related operations will take on greater significance in the next few years as countries simultaneously face the costs of: (i) maintaining and improving regular healthcare services; while (ii) managing the remaining COVID-19 caseload; and (iii) implementing measures that will bring the epidemic under control. The IDB Group will also support cost-effective investments to prepare for future epidemics and public health emergencies. It will undertake analytical work to project future health spending and show the responsiveness of health spending to alternative health promoting policies.
- 5.5 **Efficiency improvements can be sustained through establishing appropriate institutions.** The IDB Group will continue to provide technical assistance and the development of components of operations to support the use of cost-effectiveness criteria to inform allocative choices. The use and results of this priority-setting will differ across countries due to, among other things, differences in the disease burden and the current state of healthcare delivery. For example, while all countries need to allocate adequate funds to cost-effective immunization programs, countries differ with regard to how comprehensively they are providing the most cost-effective measures for preventing disease through better nutrition, screening and management of chronic conditions, and prevention and care for maternal and infant health. The IDB Group will also support the institutionalization of health technology assessment to promote decisions that are informed by evidence on the effectiveness of medical procedures, medications, and devices, in relation to their relative costs. This may include associated regulatory and procurement reforms to assure value for money when purchasing medications, diagnostics, and supplies.
- 5.6 **Health sector fragmentation is an obstacle to fiscal and financial sustainability.** Health system fragmentation is inherently inefficient. It creates hurdles for continuity of care for patients and it allocates resources based on employment, income, or location rather than health needs. The IDB Group will engage in policy dialogue and knowledge generation to demonstrate the benefits of reducing fragmentation and to identify promising strategies for unifying or better coordinating healthcare institutions. The IDB Group will be open to supporting countries that seek to integrate healthcare financing institutions through financing reforms; to standardize information systems, payments, and service coding; and to integrate their service delivery networks; among other reform initiatives.

- 3. Line of Action 3: Improve the organization and quality of healthcare service delivery particularly for diverse, marginal, and disadvantaged groups**
- 5.7 **Progress toward UHC will require better integration of healthcare service delivery.** The COVID-19 pandemic exposed many healthcare service deficiencies related to infrastructure, human resources, information systems, and management. Integrated healthcare service delivery systems are less likely to have these deficiencies and can be more resilient in the face of crises. Therefore, the IDB Group will build on its extensive experience supporting the development of integrated healthcare service delivery by continuing to support countries seeking to reduce social and cultural barriers to healthcare, to reduce income differentials in healthcare access, and to improve the distribution of services between healthcare levels; as well as introducing or improving referral systems; supply and logistics management; digital health; and information systems. The IDB Group will support expansions of infrastructure, including improvements in facility maintenance and management, and promoting private sector involvement. Health-related infrastructure investments will adopt, to the extent possible, sustainable construction material and measures as per the [IDB Manual of Green Building](#). The IDB group will encourage healthcare infrastructure designs and upgrades that generate resilience to natural disaster and climate change (Barandiarán et al., 2019). Finally, it will develop and disseminate knowledge on infrastructure and maintenance planning and management.
- 5.8 **Successful integration of healthcare service delivery requires systemic change** involving referrals, finance, and work culture. The IDB Group will support countries engaged in governance reforms that promote such changes as: (i) appropriate linkages between PHC and other healthcare services; (ii) financial management that allocates resources based on need and cost-effectiveness, while providing positive incentives for staff and management; and (iii) interventions that focus on service quality, establishing work cultures that reward performance measurement, analysis, adaptation, and improvement. It will also support governance reforms which clarify responsibilities between government levels, especially in federated countries, to promote coherent national health policymaking while building subnational capacity to manage local policy and services where appropriate. Through knowledge generation and technical assistance, the IDB Group will also support countries in improving education and other demand-side factors that influence the population's healthcare seeking behaviors, to encourage timely access to health services at facilities appropriate to the required level of care.
- 5.9 **Successful integration of healthcare service delivery requires a focus on prevention and chronic disease management** along with the ability to provide curative care. In countries that have a high disease burden associated with communicable, maternal, neonatal, and nutritional diseases this involves significant attention to improving immunization coverage, maternal and child healthcare services, and addressing sexual and reproductive health. In most countries, it involves building adequate responses for mental health with appropriate care, and detection and management of non-communicable disease. It includes screening and support in relation to violence against women.

- 5.10 **Healthcare services will have to cope with the COVID-19 pandemic while reactivating other healthcare services and preparing for future emergencies.** In the near future, countries will have to treat COVID-19 patients, slow transmission, protect health workers, and implement vaccination campaigns against COVID-19 while reactivating other healthcare services and strengthening essential public health functions for prevention and preparedness. The IDB Group will support countries in reconfiguring healthcare services to meet these multiple challenges through such interventions as ensuring adequate resources, supporting health personnel, promoting telemedicine, and encouraging the use of appropriate behavioral interventions. It will respond to countries seeking assistance with the purchase of COVID-19 vaccines along with activities required to vaccinate the population from planning through logistics, training, distribution, monitoring and evaluation. These activities will preferably strengthen the country's overall immunization program to sustain efforts at preventing other infectious diseases. It will also support stronger preparedness through investments in diagnostic networks, surveillance, logistics, communications, planning and coordination. Finally, it will assist countries in anticipating the medium to long-term impacts of COVID-19 on health and support them in readying healthcare systems to address them.
- 5.11 **Digital health and information technology can contribute to UHC progress under the right conditions.** The IDB Group has identified the contextual factors necessary for successful digital transformation in health, related to governance, regulations, and infrastructure, and the linkages that are necessary with healthcare service processes. In partnership with PAHO, the IDB Group will continue to develop knowledge products related to the use and implementation of digital health technologies. In its operations, it will also support components that contribute to digital health strategies that are aligned with a country's overall health strategy, including the adoption of EHRs and associated policies for interoperability, privacy and confidentiality, electronic prescriptions, telemedicine, digital signatures and others. For countries pursuing a digital health strategy, the IDB Group will support related investments in infrastructure, including internet connectivity and hardware, along with Infostructure (see ¶3.57). The IDB Group will build on existing initiatives to support implementation of national eHealth business and technical architecture. IDB Invest and IDB Lab may finance innovative private sector initiatives in digital health where the national eHealth architecture is appropriate.
- 5.12 **Inequities in healthcare service access and quality can be reduced.** Doing so requires allocating healthcare resources based on need, eliminating differential access by income, and making healthcare services culturally and socially acceptable to diverse groups of people. It also involves efforts to actively promote decision-making and engagement from diverse groups in policymaking, healthcare strategies, staffing, and operation. Supporting such activities is aligned with the IDB Group's Environmental and Social Policy Framework (ESPF) by incorporating the interests and engagement of diverse populations. The IDB Group will assist countries in expanding the supply of services in underserved areas but put greater emphasis on improving the quality and capacity of healthcare facilities and staff serving disadvantaged populations. The IDB Group will continue to research and measure gaps in health outcomes and healthcare quality experienced by lower income groups, indigenous people, African descendants, and people with disabilities; explore how to support governments in addressing challenges facing

people of varying sexual orientation; and research healthcare service approaches that promote social innovation and incorporate diverse groups as agents of change who bring their own perspectives, knowledge and worldviews.

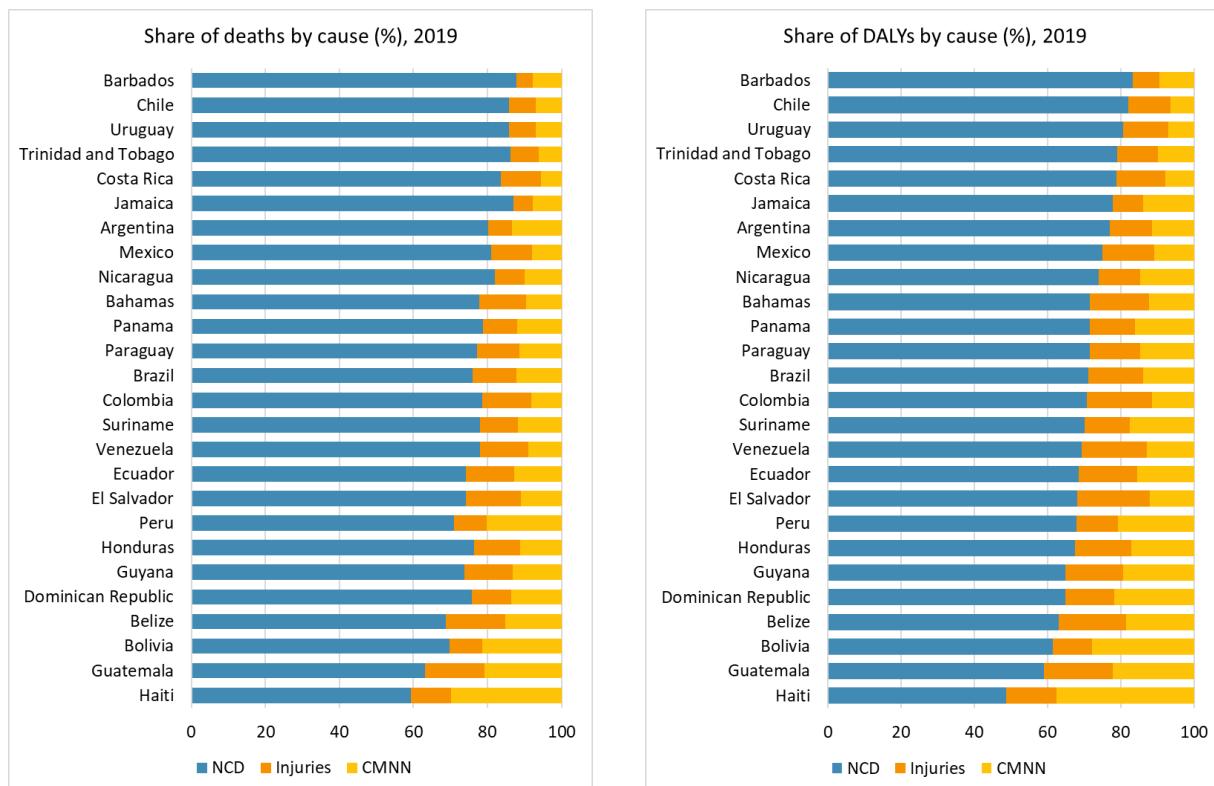
- 5.13 **Without investments in human resources, it will be difficult to progress toward UHC.** Many countries lack enough trained professionals to adequately serve their populations or underutilize them through poor management. Most health systems also have difficulties providing training, working conditions, and support for health professionals to be more productive. In addition to its operations supporting human resource planning and training, the IDB Group will promote knowledge generation and policy dialogue regarding investments in human resources for health –from formal education and on-the-job training, to policies that affect working conditions and recruitment, retention, and turnover.
- 5.14 **The private sector can greatly contribute to UHC progress.** Experiences in which the public sector contracts or partners with the private sector have shown the potential for improving performance and reducing costs. However, engaging the private sector within universal health coverage systems can be complex. It requires appropriate regulatory frameworks, transparent public systems for financing research and contracting services, along with effective support for academic institutions and research centers. The IDB Group will support countries interested in improving their engagement with private sector in different ways. First, countries can: (i) use PPPs to build and maintain healthcare infrastructure and/or sophisticated medical equipment; (ii) contract with non-profit healthcare service providers; and (iii) contract non-medical services from private firms such as logistics or facility management. The IDB Group will also support efforts to foster greater innovation by strengthening the public-private ecosystems in which research, development, and production occur. This could include efforts to develop vaccines or treatments for neglected tropical diseases, as well as the broader capacity to supply the region with necessary medical equipment, medications, and supplies. The IDB Group, and particularly IDB Invest and IDB Lab, will seek ways to promote private sector firms producing goods and services for the health sector, including diagnostics, medical devices, and digital health services, especially when linked to public sector needs.

ANNEX I. FIGURES

Disease burden and risks

This section is based on data between 1990 and 2019 from the Institute for Health Metrics and Evaluation (IHME) - Global Health Data Exchange (GHDx) results tool. Includes all-cause and all-risks deaths and DALYs for all age groups, sexes, and locations – including WHO regions, World Bank Income Levels, and more. The top-level disease categories are non-communicable diseases (NCD), injuries (transport and unintentional), and communicable, maternal, neonatal, and nutritional diseases (CMNN). Figures for IDB regions are simple unweighted averages of country data.

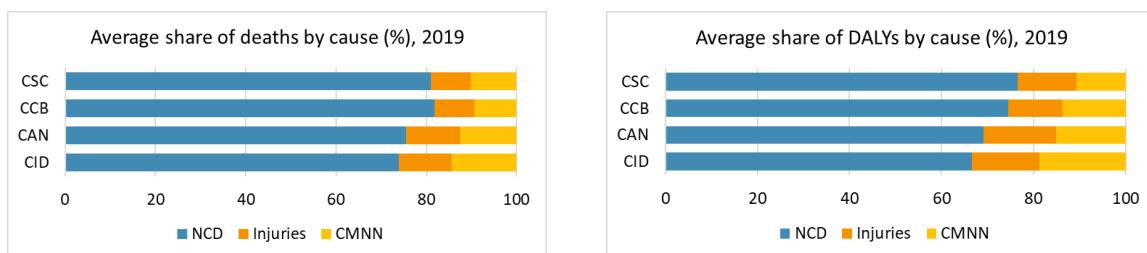
Figure 1 – Burden of disease by country and cause, 2019



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

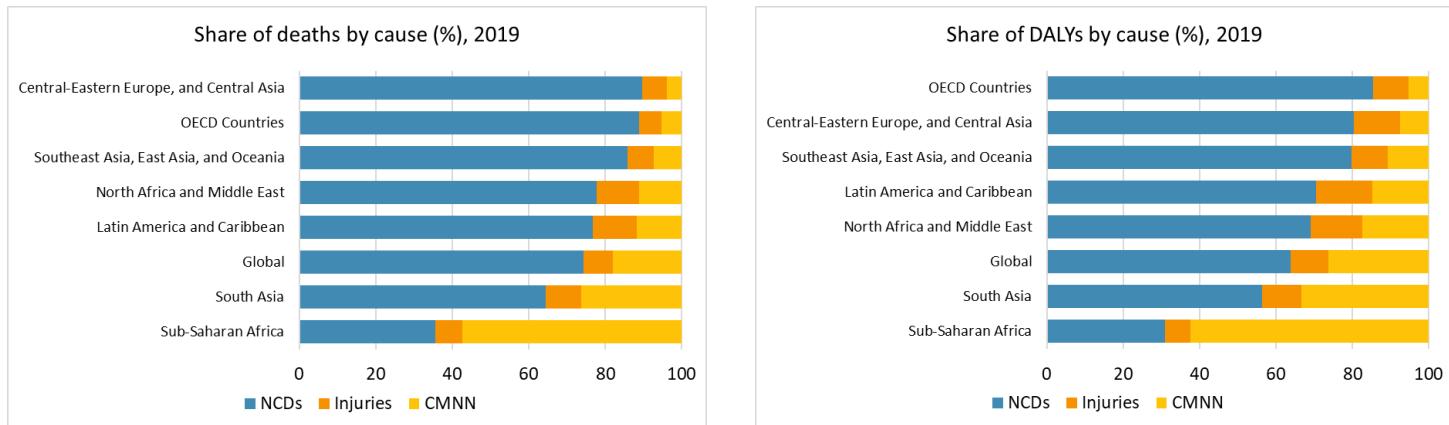
Figure 2 – Burden of disease by IDB region and cause, 2019



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 3 – Burden of disease by world region and cause, 2019

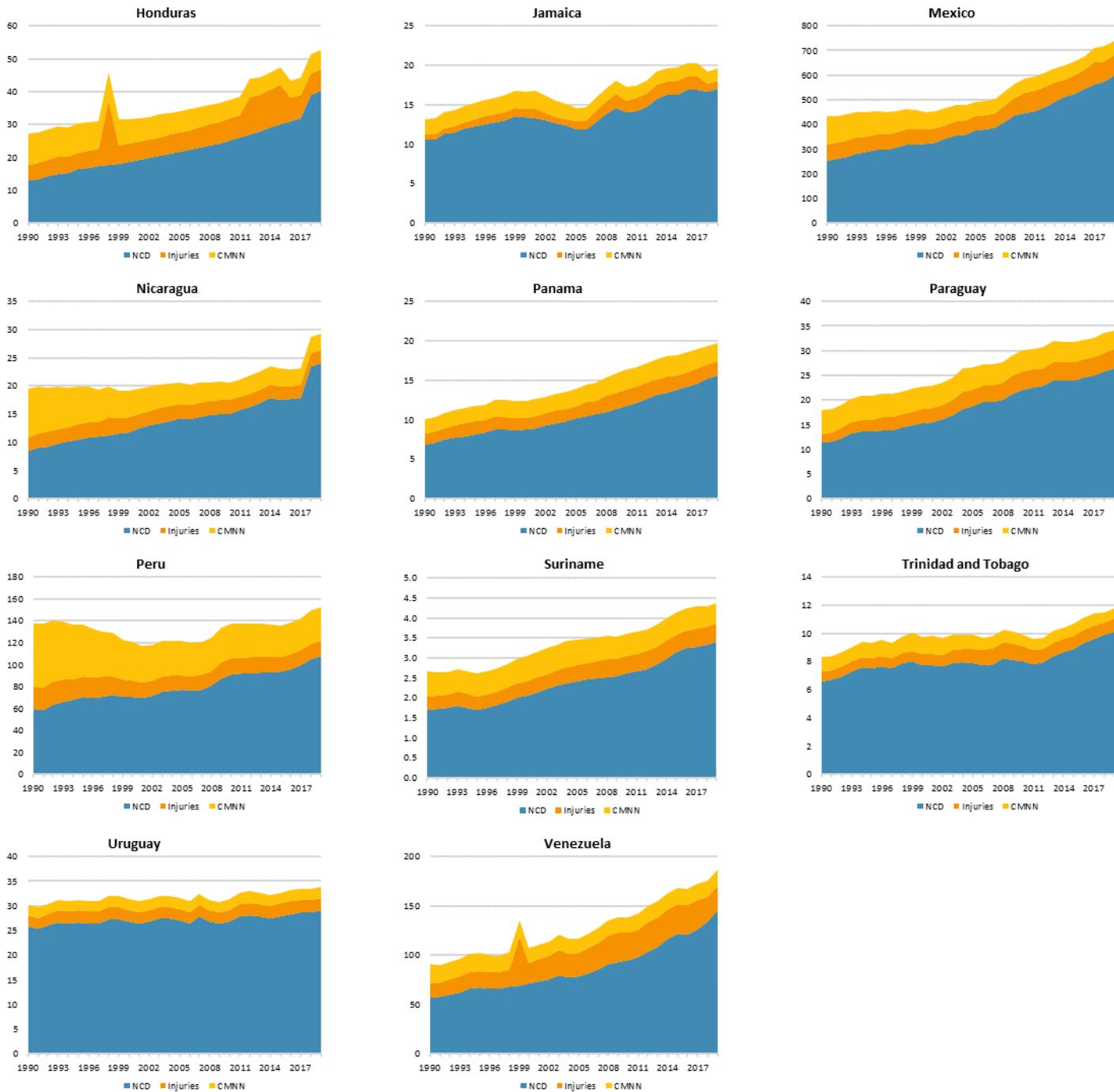


Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 4 - Deaths by country and cause, 1990–2019 (thousands)

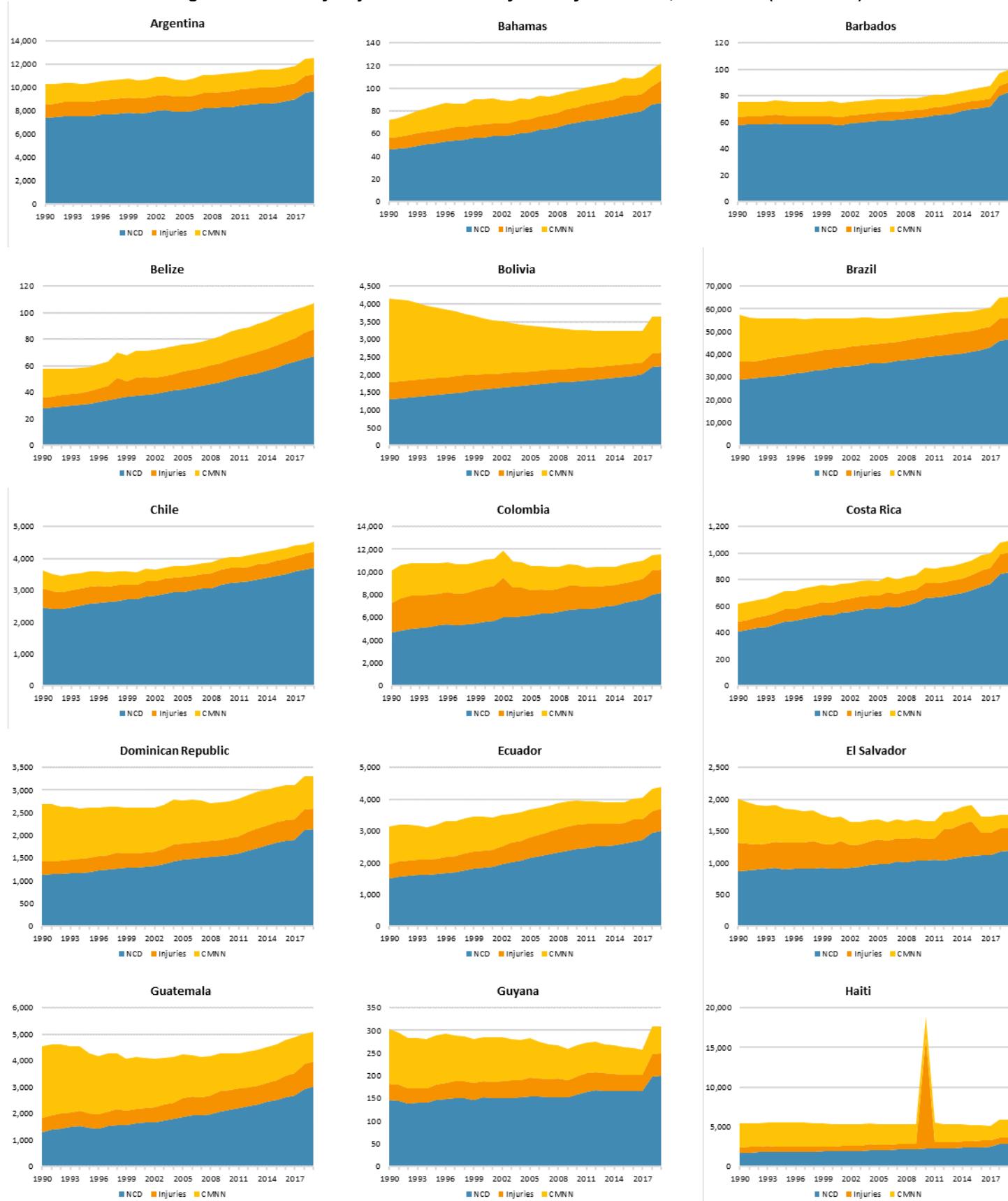




Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 5 – Disability Adjusted Life Years by country and cause, 1990–2019 (thousands)

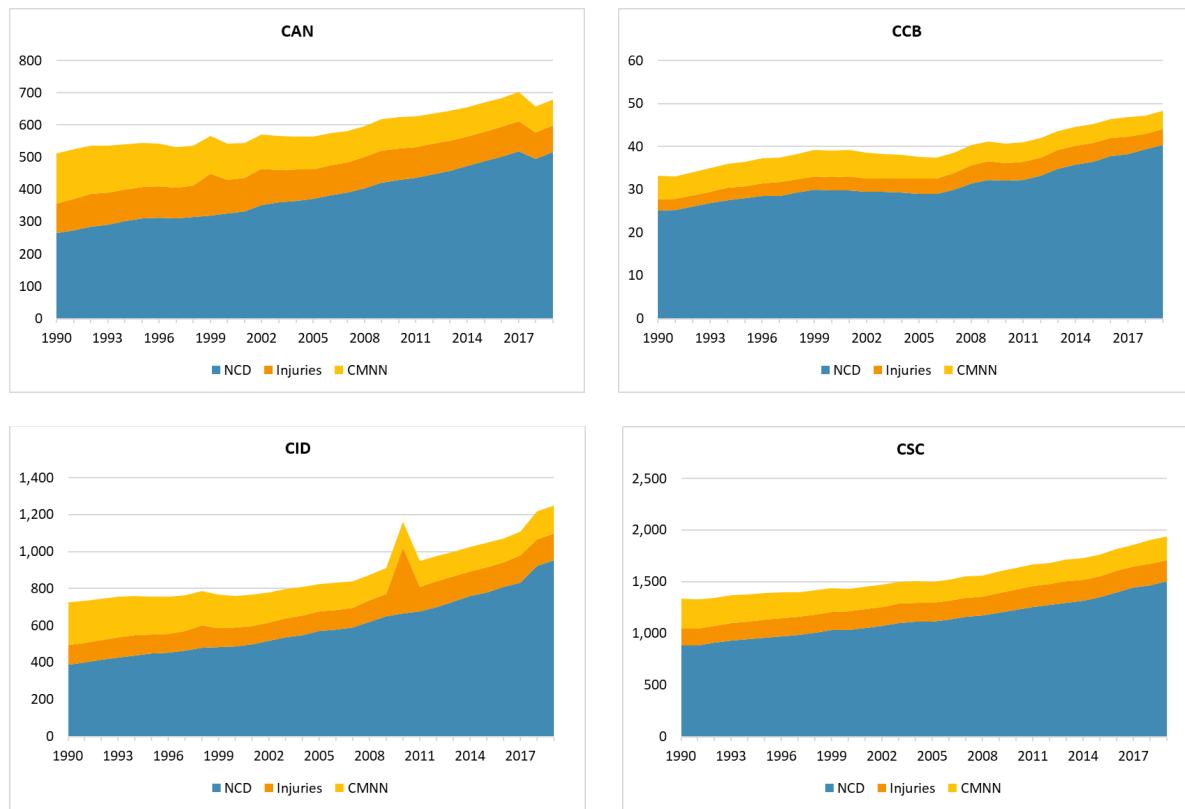




Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 6 - Deaths by IDB regions and cause, 1990–2019 (thousands)



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

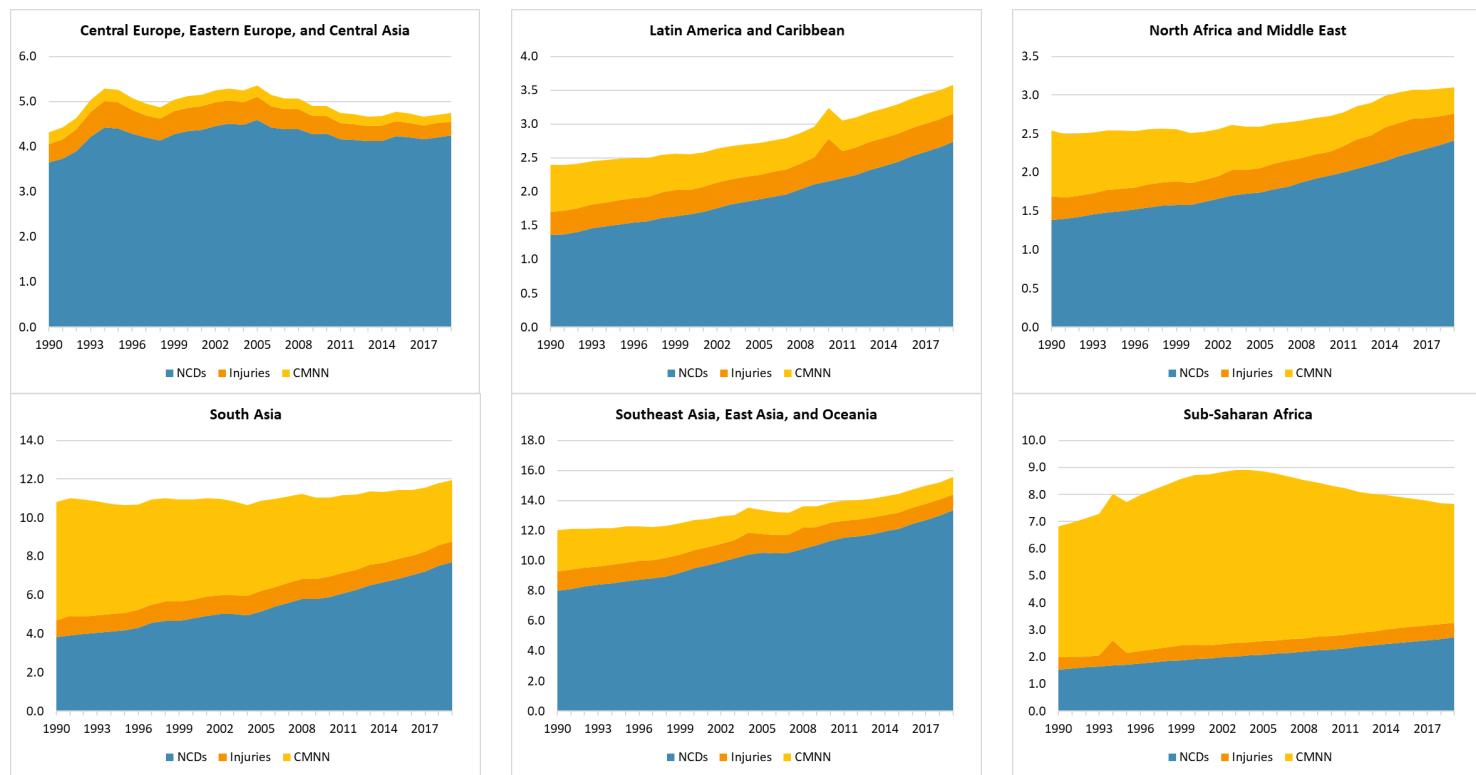
Figure 7 – Disability Adjusted Life Years by IDB regions and cause, 1990–2019 (millions)



Source: calculations based on IHME, GHDx, accessed November 2020.

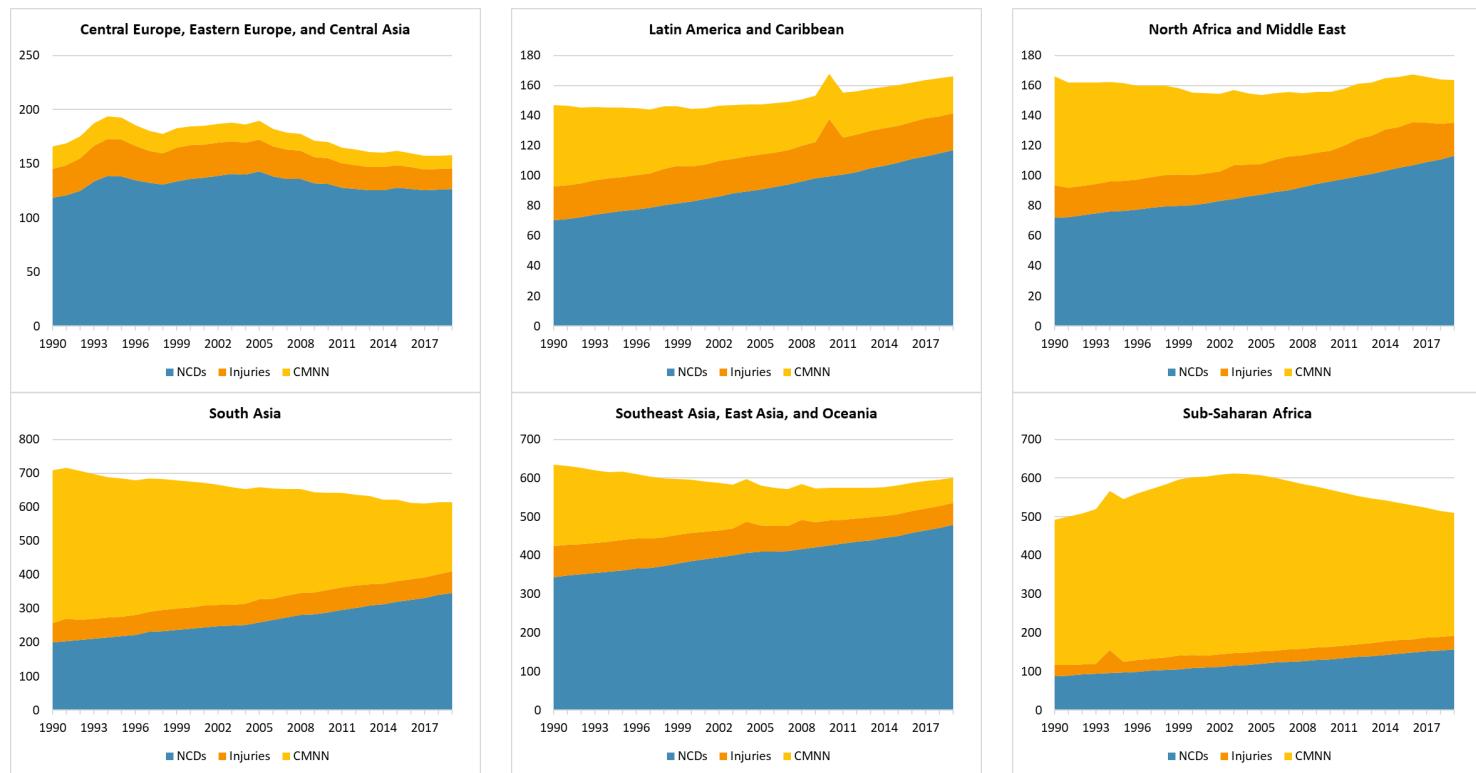
Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 8 - Deaths by world regions and cause, 1990–2019 (millions)



Source: calculations based on IHME, GHDx, accessed November 2020.

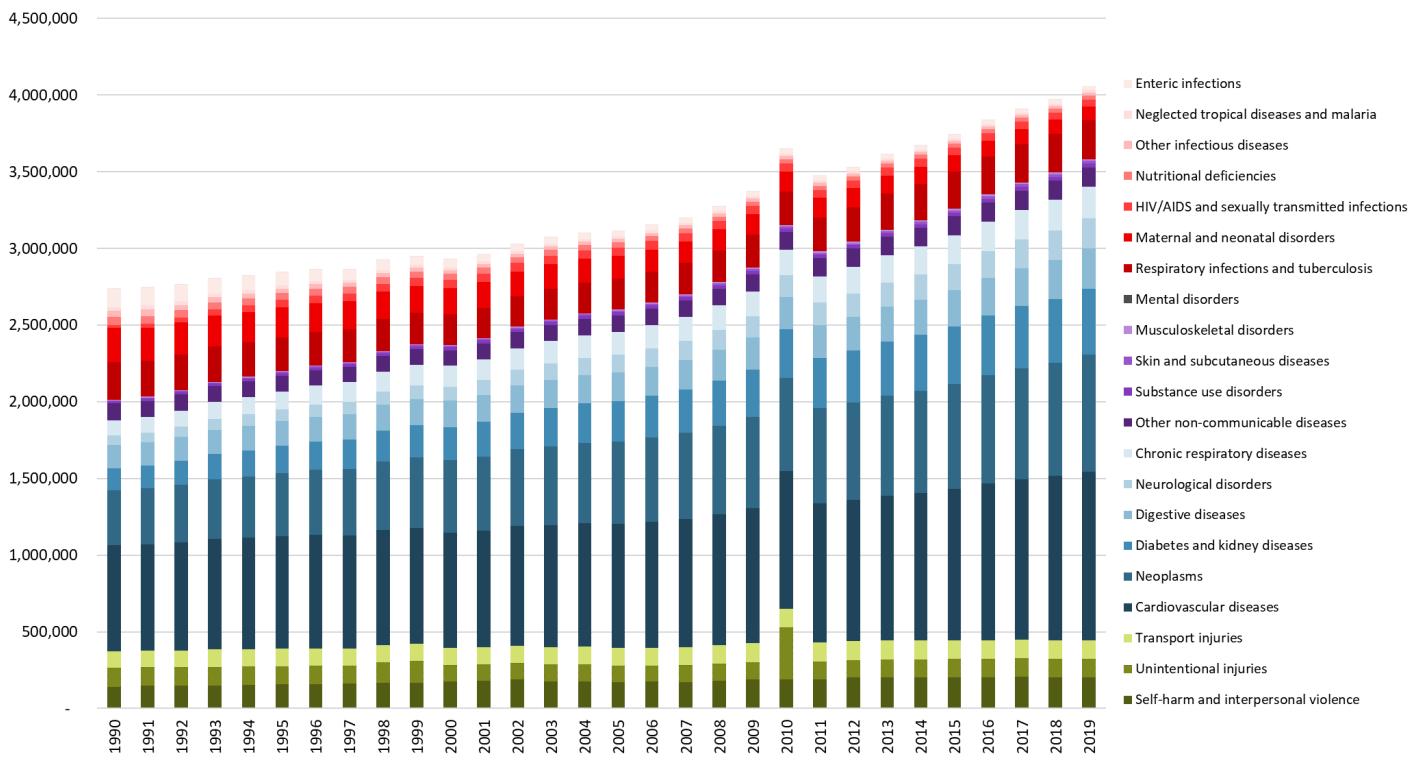
Figure 9 – Disability Adjusted Life Years by world regions and cause, 1990–2019 (millions)



Source: calculations based on IHME, GHDx, accessed November 2020.

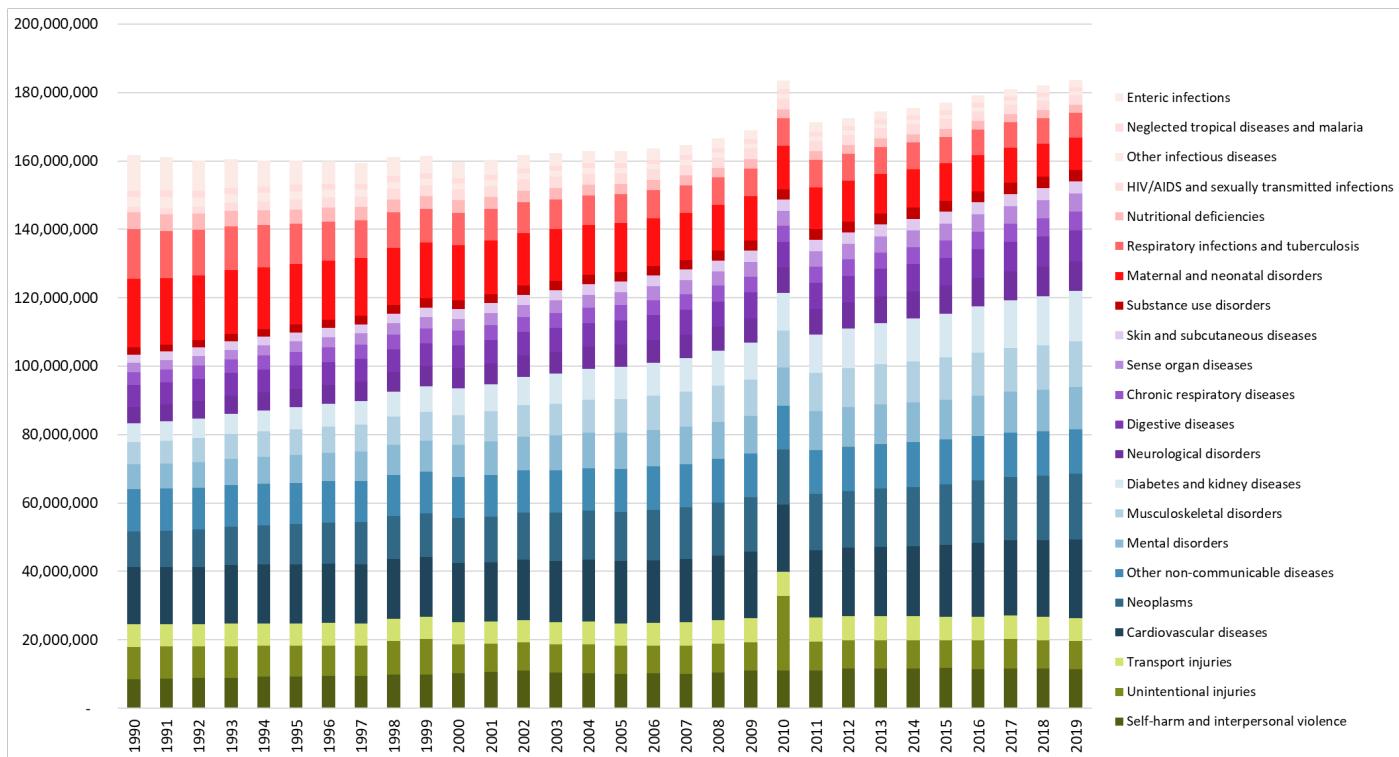
Note: NCD = Noncommunicable diseases; CMNN = communicable, maternal, neonatal, and nutritional diseases.

Figure 10 – Annual deaths in Latin America & Caribbean by cause, 2019



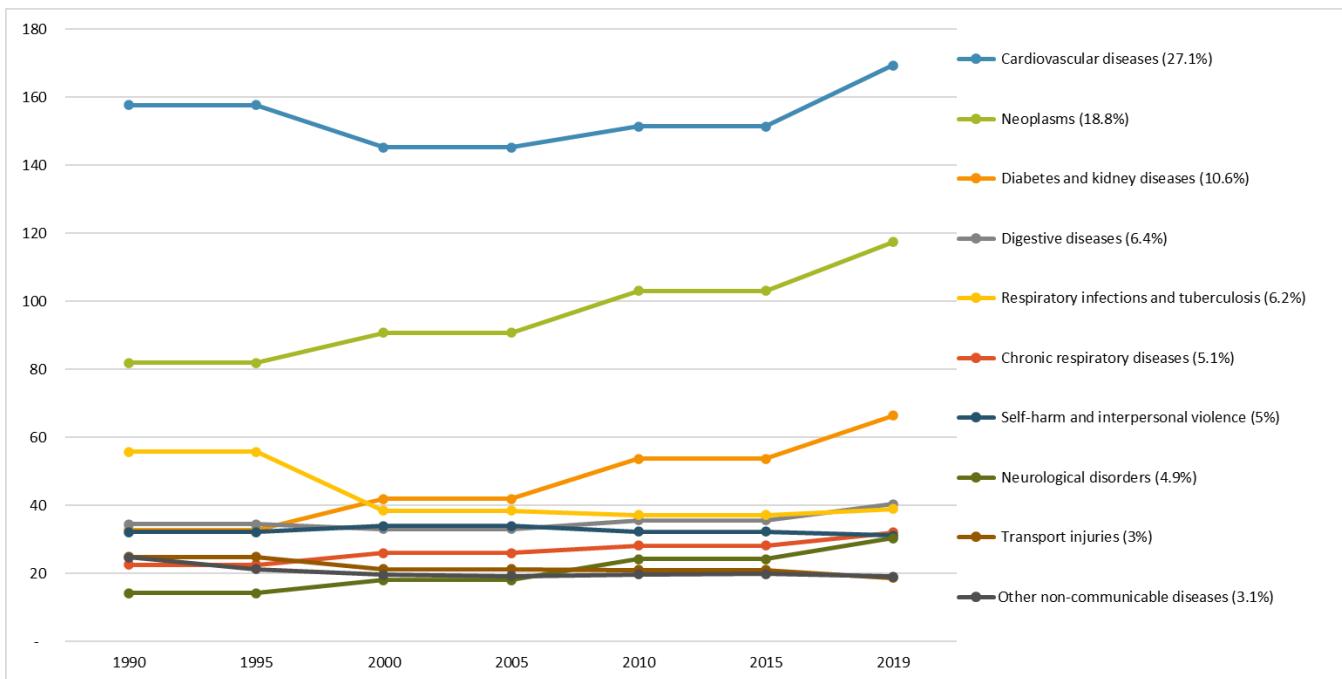
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 11 – Annual DALYs in Latin America & Caribbean by cause, 2019



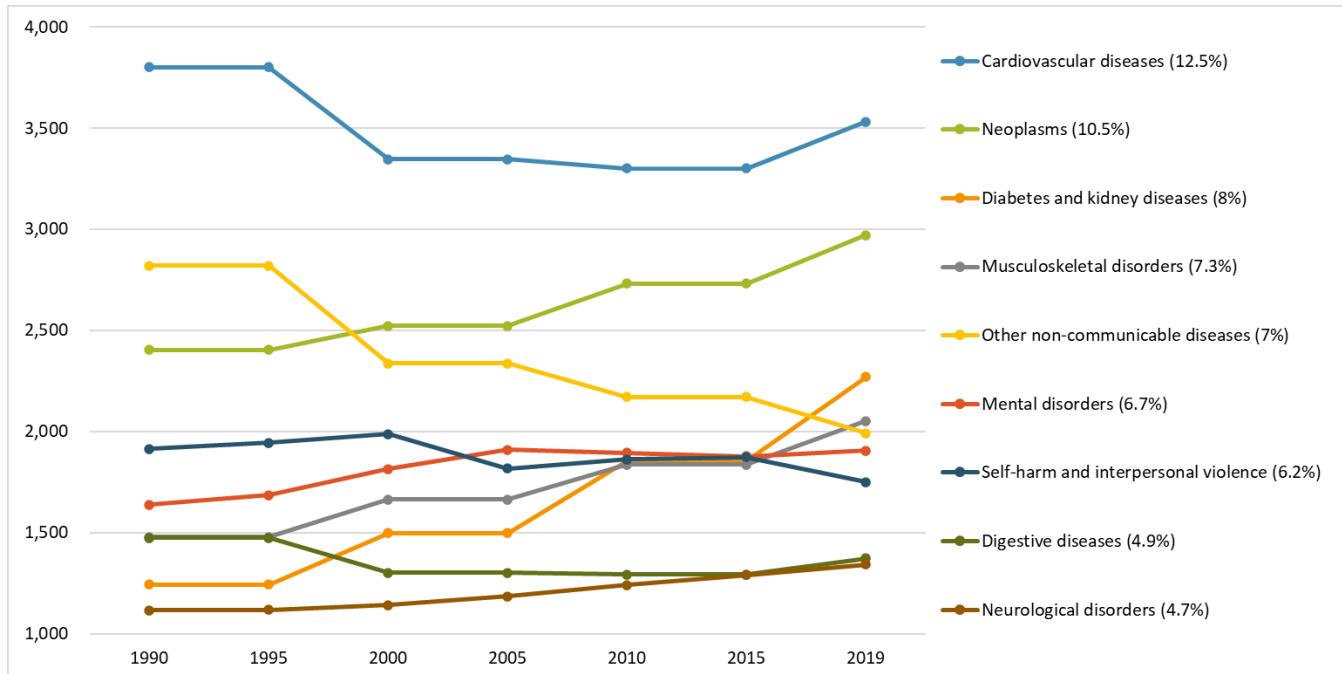
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 12 – Deaths by cause, 1990–2019 (per 100,000 population)



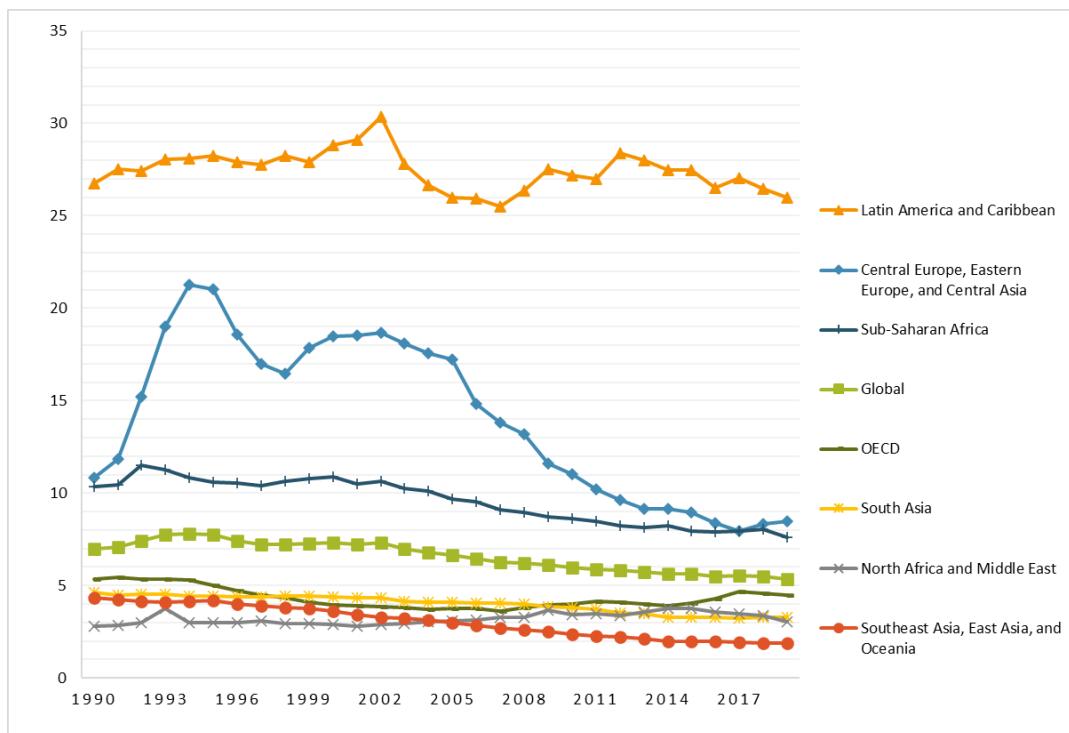
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 13 – DALYs by cause, 1990–2019 (per 100,000 population)



Source: calculations based on IHME, GHDx, accessed November 2020.

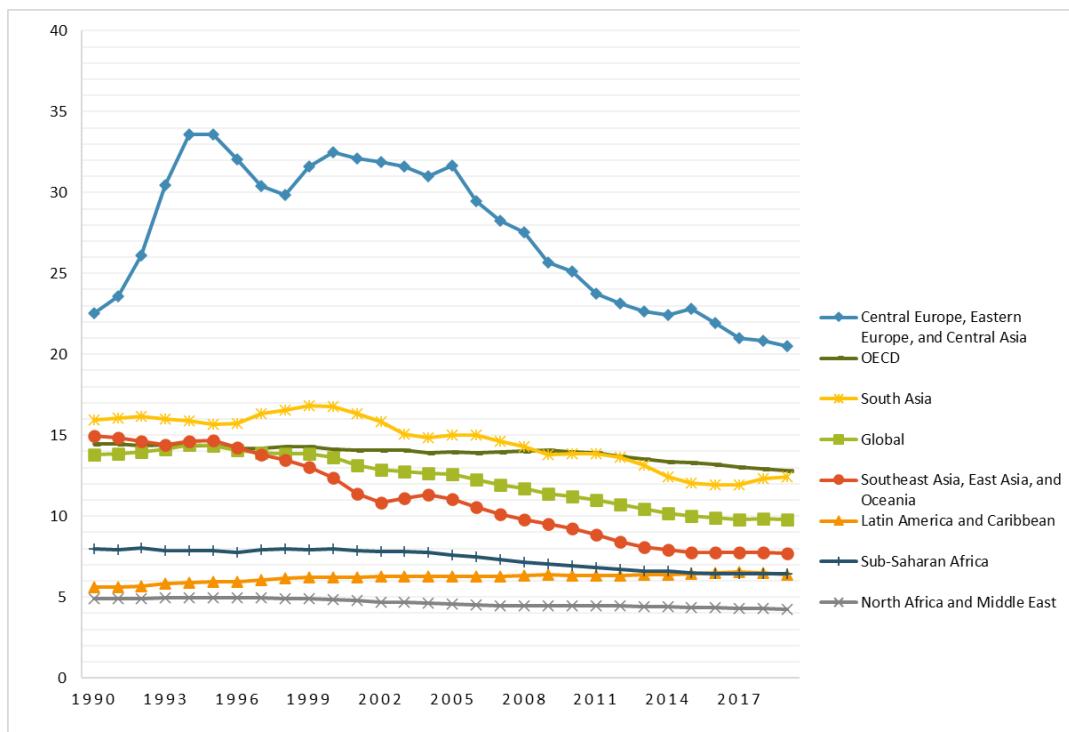
Figure 14 – Homicide rates by world regions, 1990–2019 (deaths per 100,000 population)



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

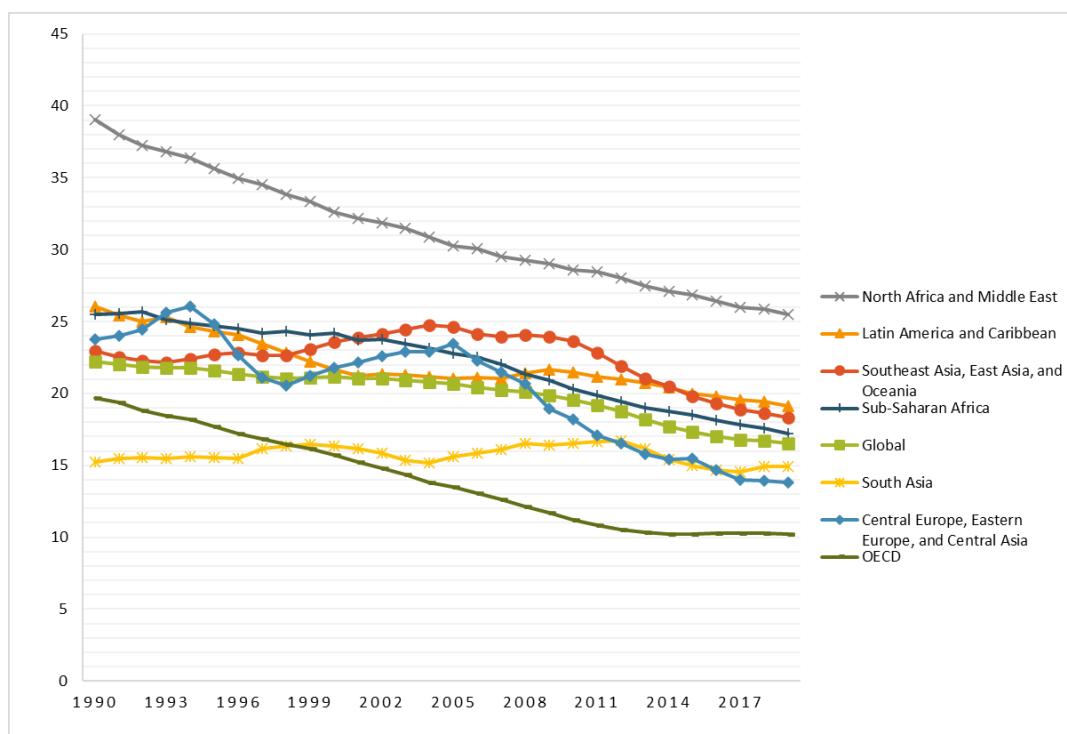
Figure 15 – Suicide rates by world regions, 1990–2019 (deaths per 100,000 population)



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

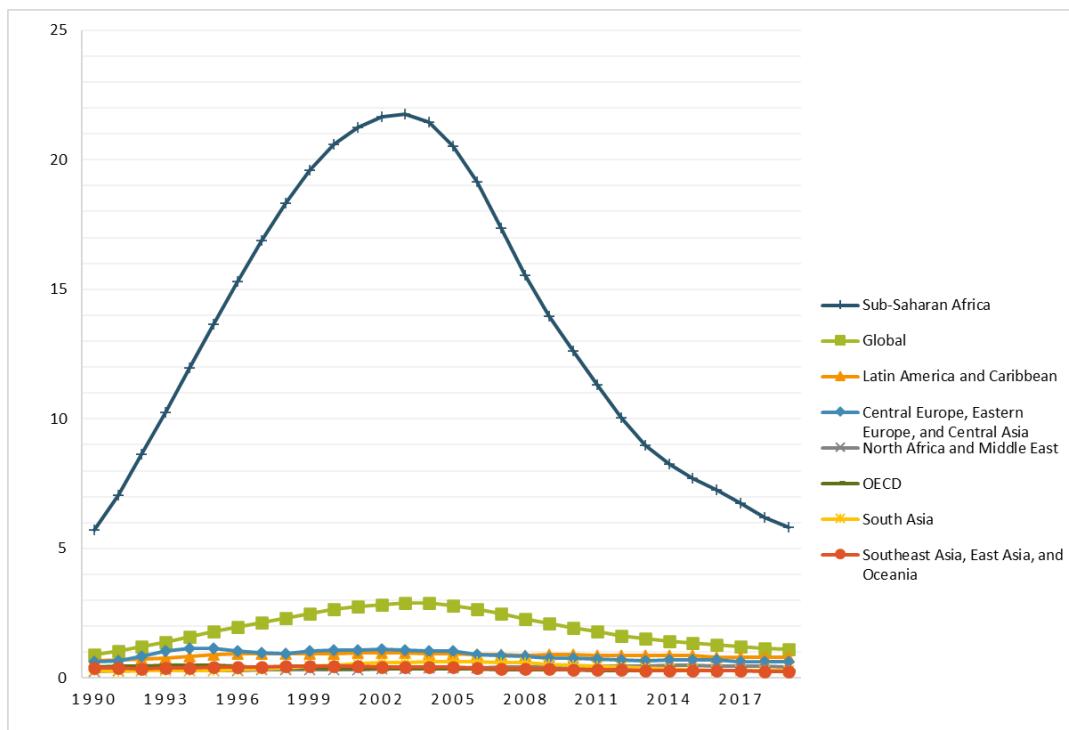
**Figure 16 – Transportation injuries by world regions, 1990–2019
(deaths per 100,000 population)**



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index.

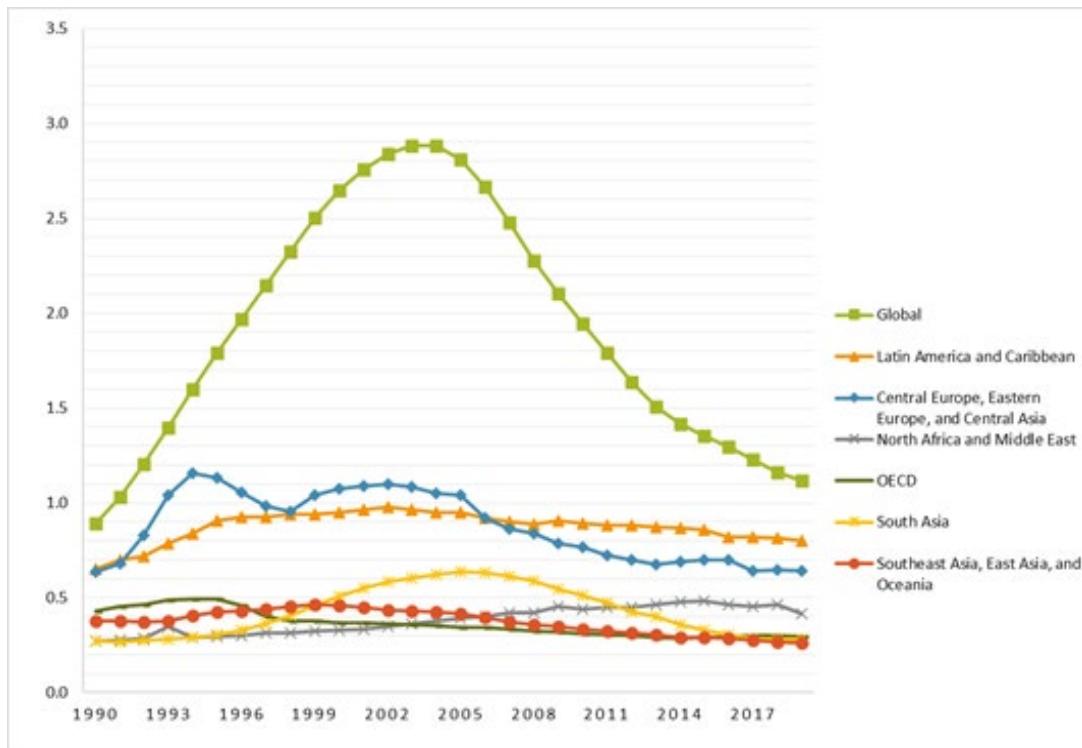
**Figure 17 – Intimate partner violence by world regions, 1990–2019
(deaths per 100,000 population)**



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

Figure 18 – Intimate partner violence by world regions except Sub-Saharan Africa, 1990–2019 (deaths per 100,000 population)



Source: calculations based on IHME, GHDx, accessed November 2020. Sub-Saharan intimate partner violence rates graphed separately.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

Figure 19 – Homicides by country and region, 2019

Figure 19.1 Countries

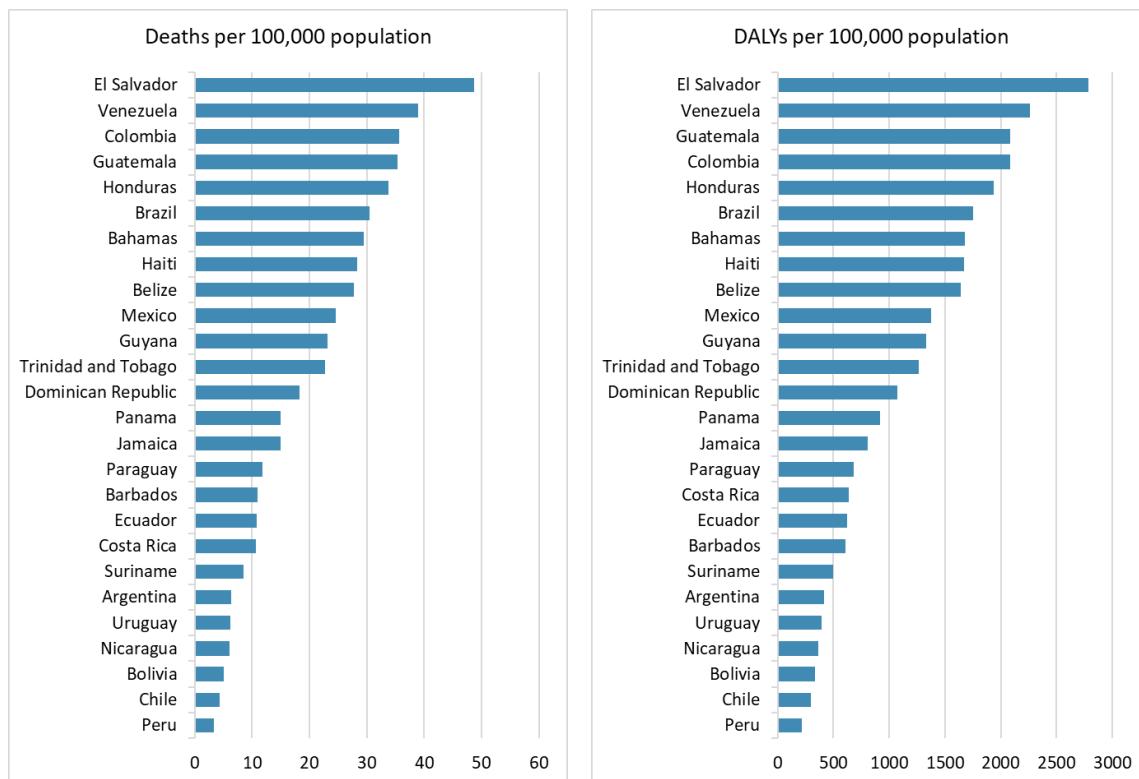


Figure 19.2. IDB regions

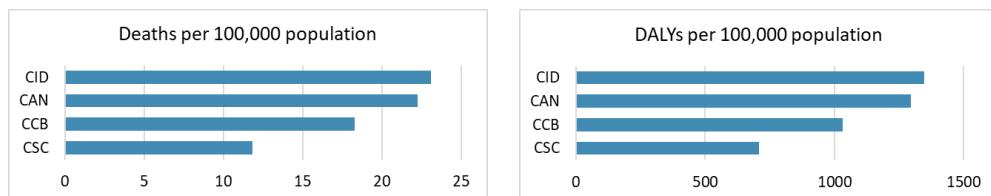
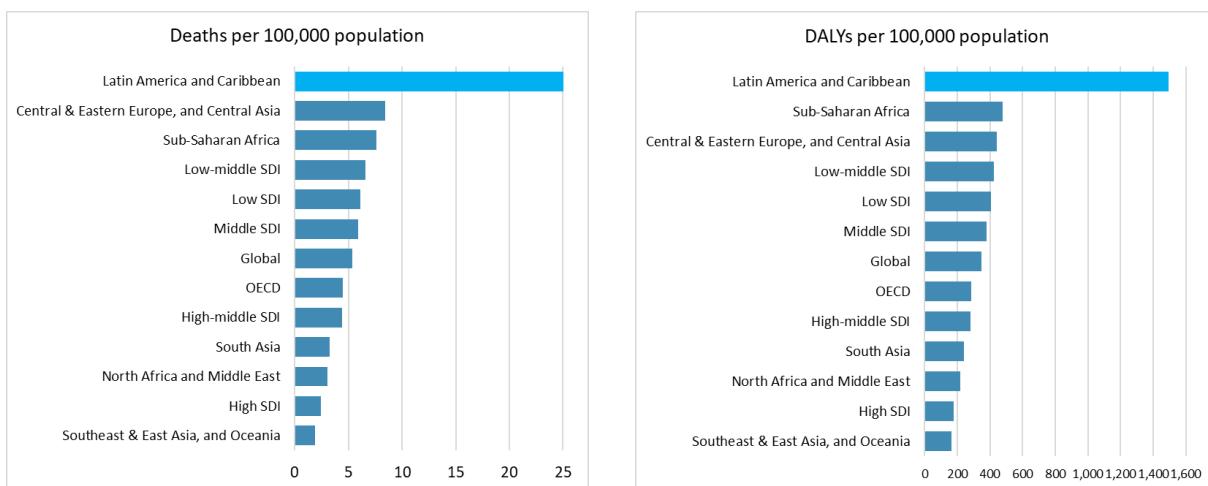


Figure 19.3. Regions



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

Figure 20 – Suicides by countries and regions, 2019

Figure 20.1. Countries

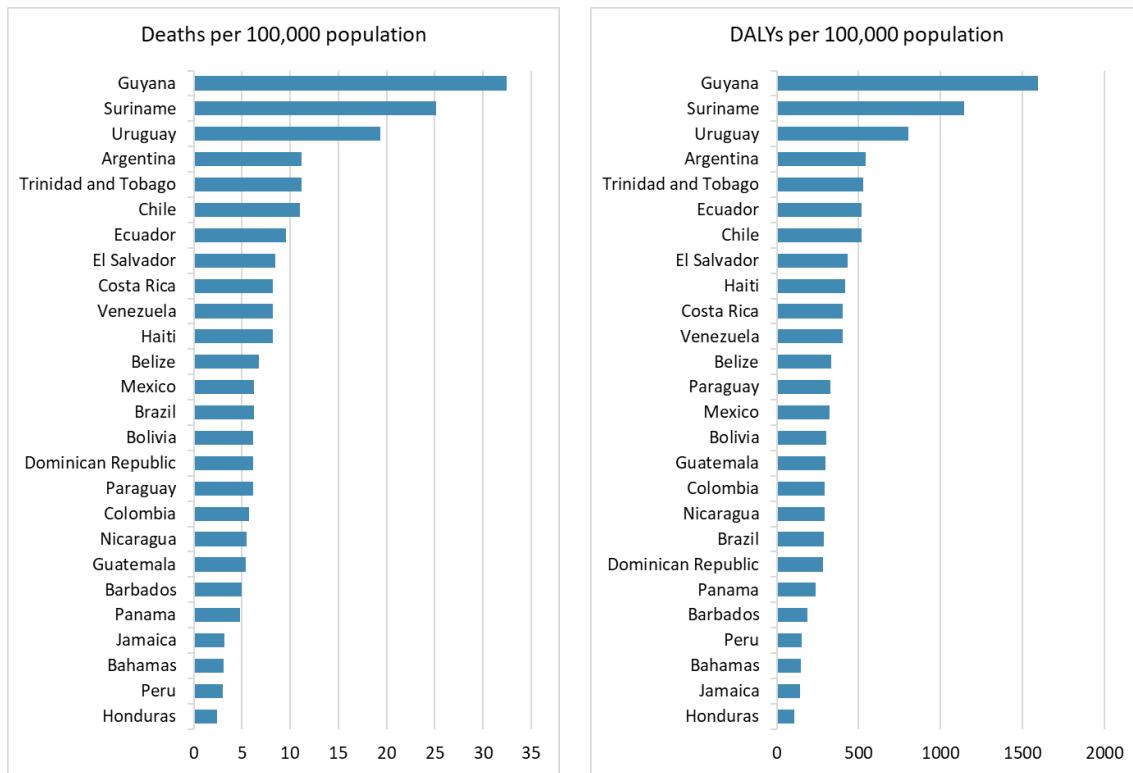


Figure 20.2. IDB regions

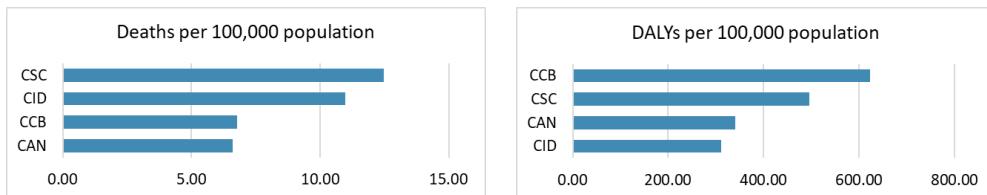
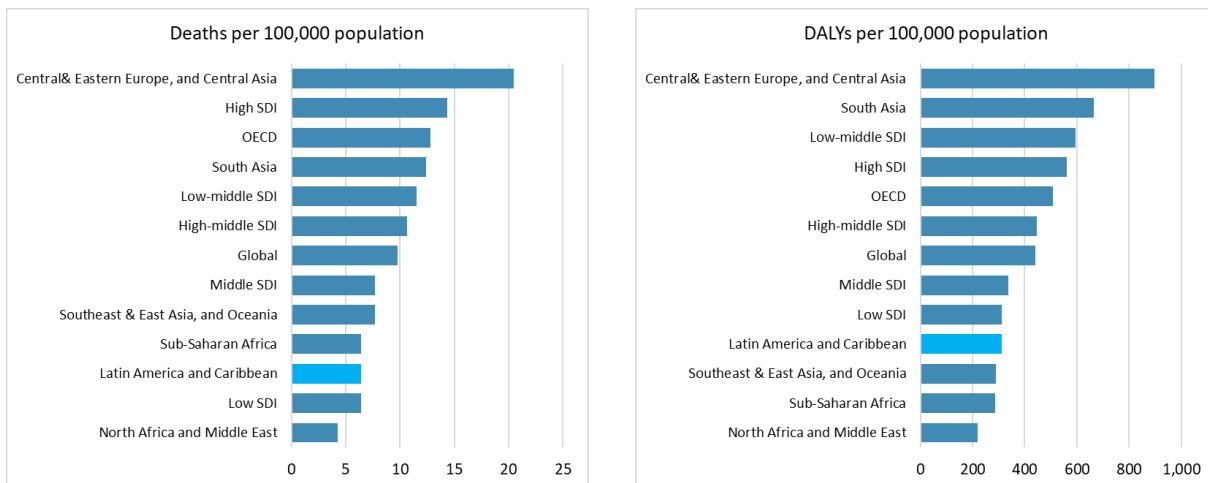


Figure 20.3. Regions



Source: calculations based on IHME, GHDx, accessed November 2020.

Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

Figure 21 – Transportation injuries by countries and regions, 2019

Figure 21.1

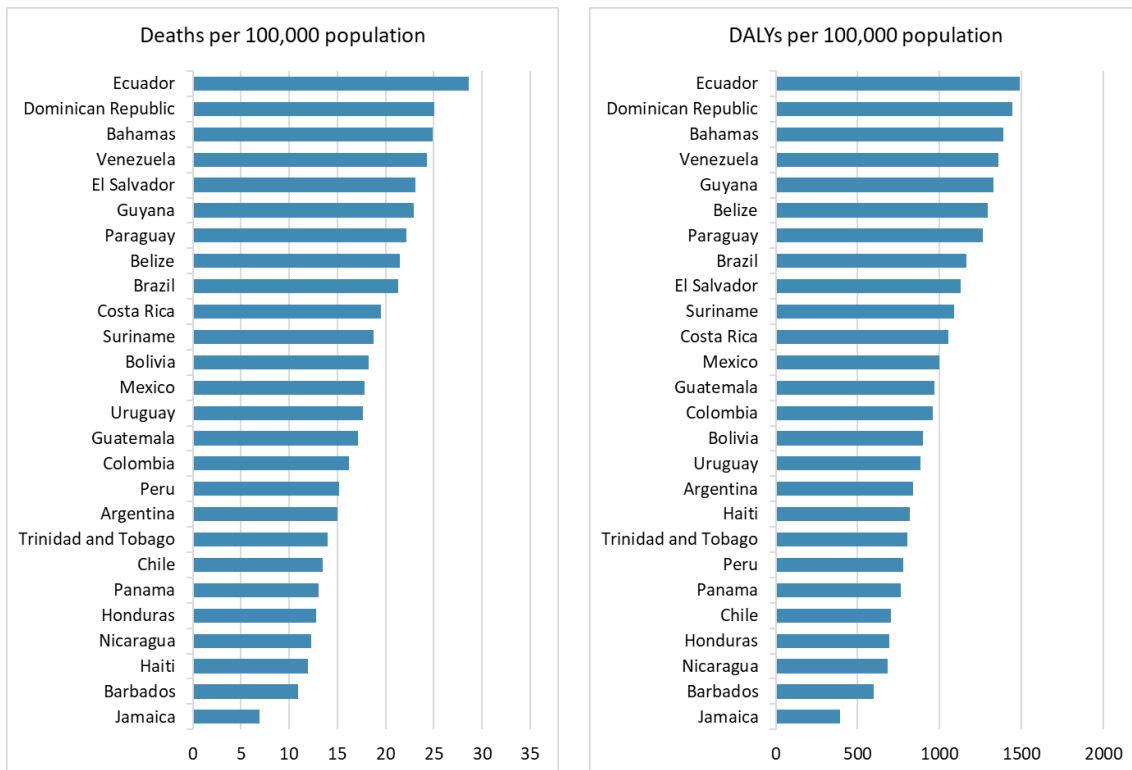


Figure 21.2. IDB regions

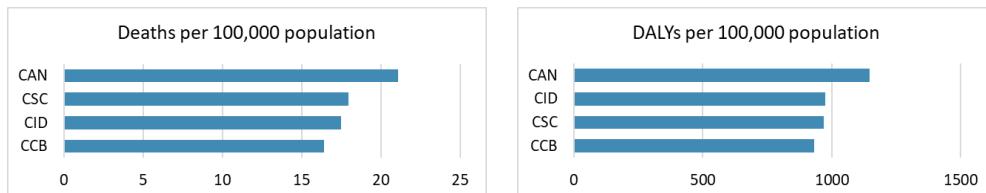
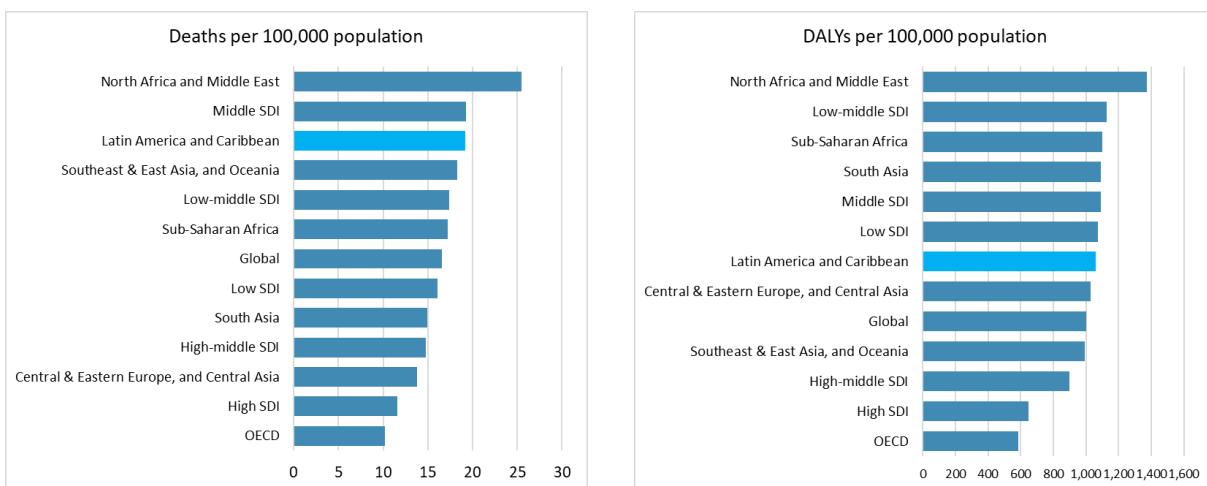


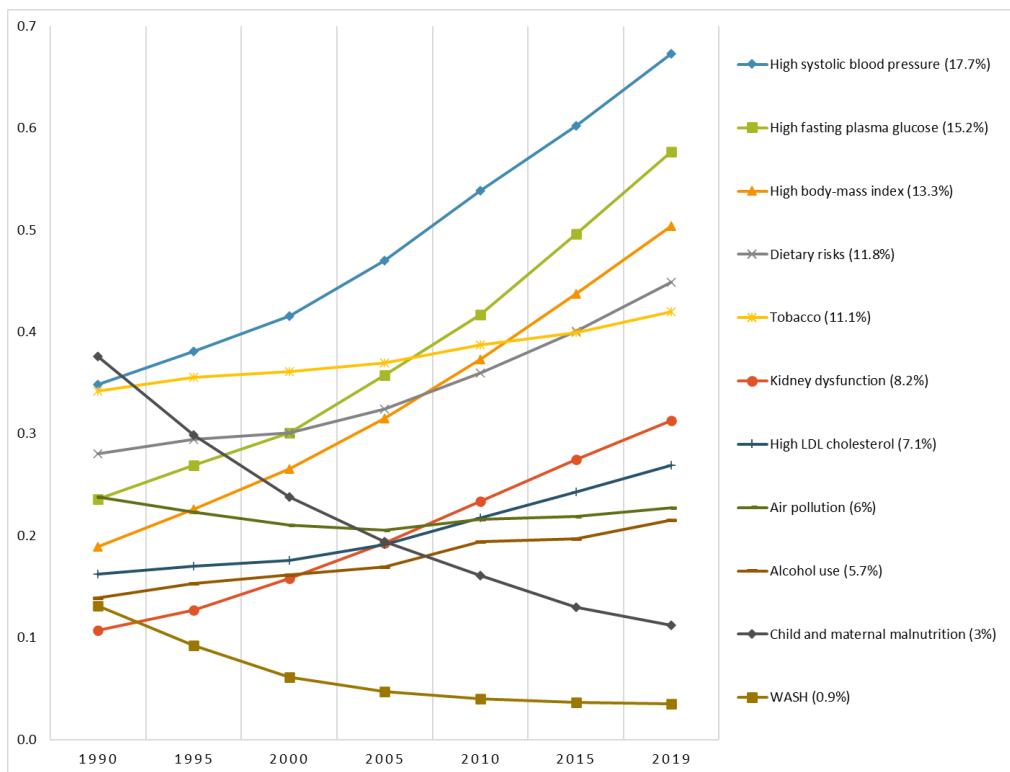
Figure 21.3. Regions



Source: calculations based on IHME, GHDx, accessed November 2020.

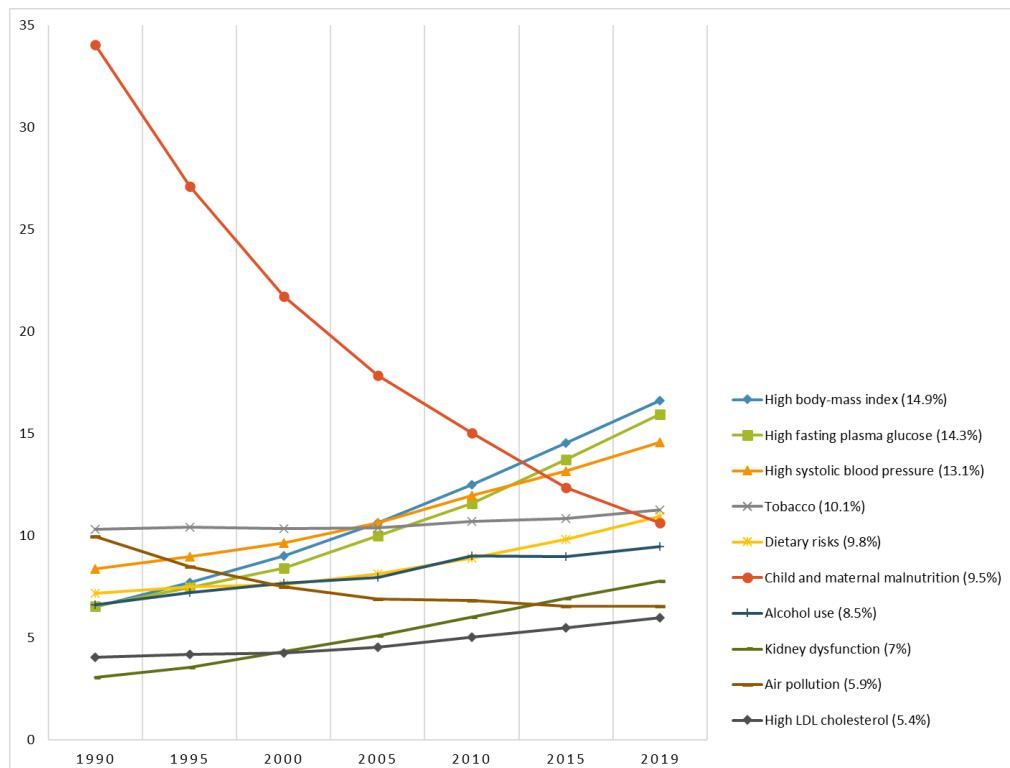
Note: SDI = Socio-demographic index; OECD = Organisation for Economic Co-operation and Development.

Figure 22 – Annual deaths by risk factor, 1990–2019



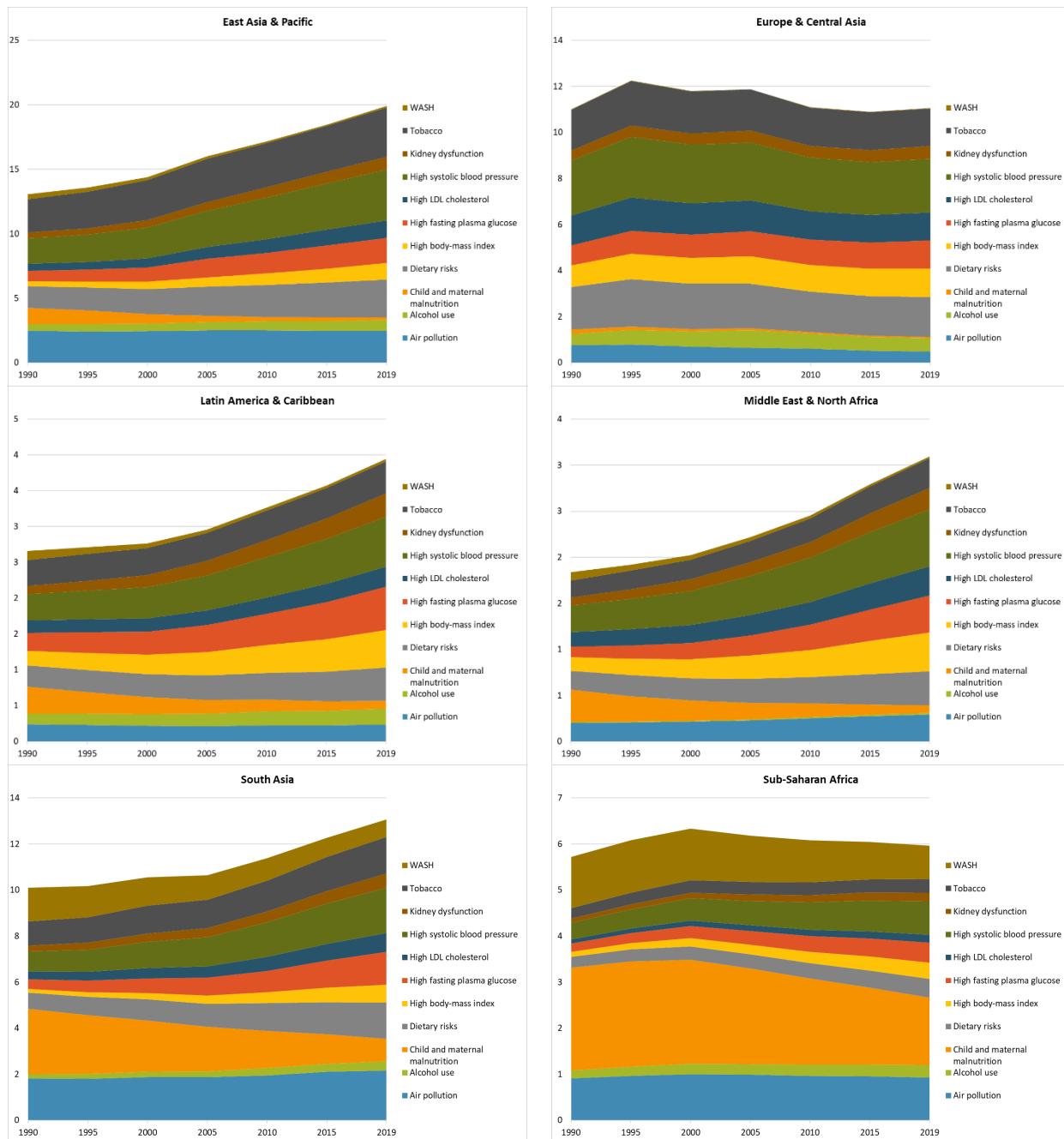
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 23 – Annual DALYs by risk factor, 1990–2019



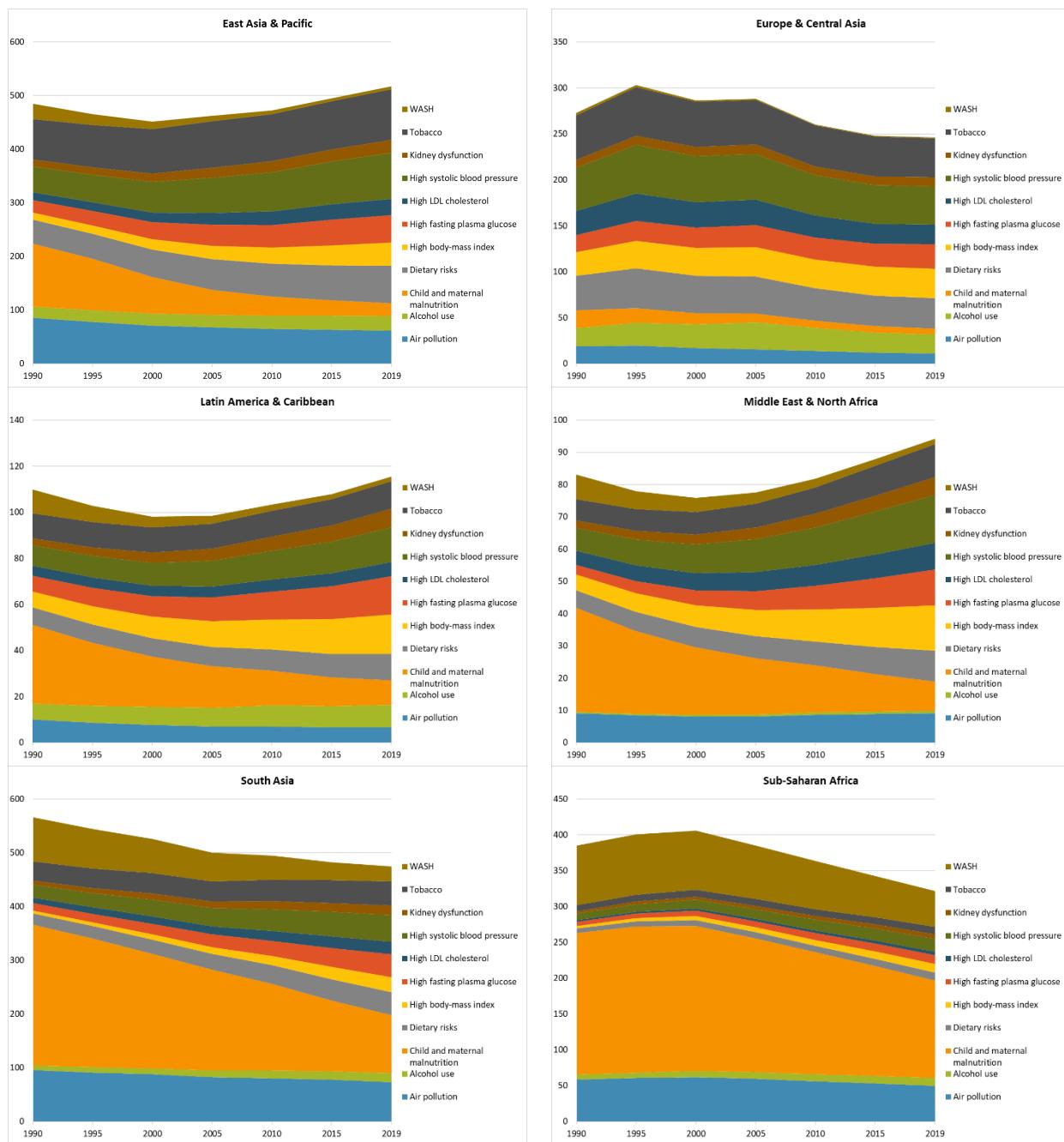
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 24 – Annual deaths by risk factor and world region, 1990–2019 (millions)



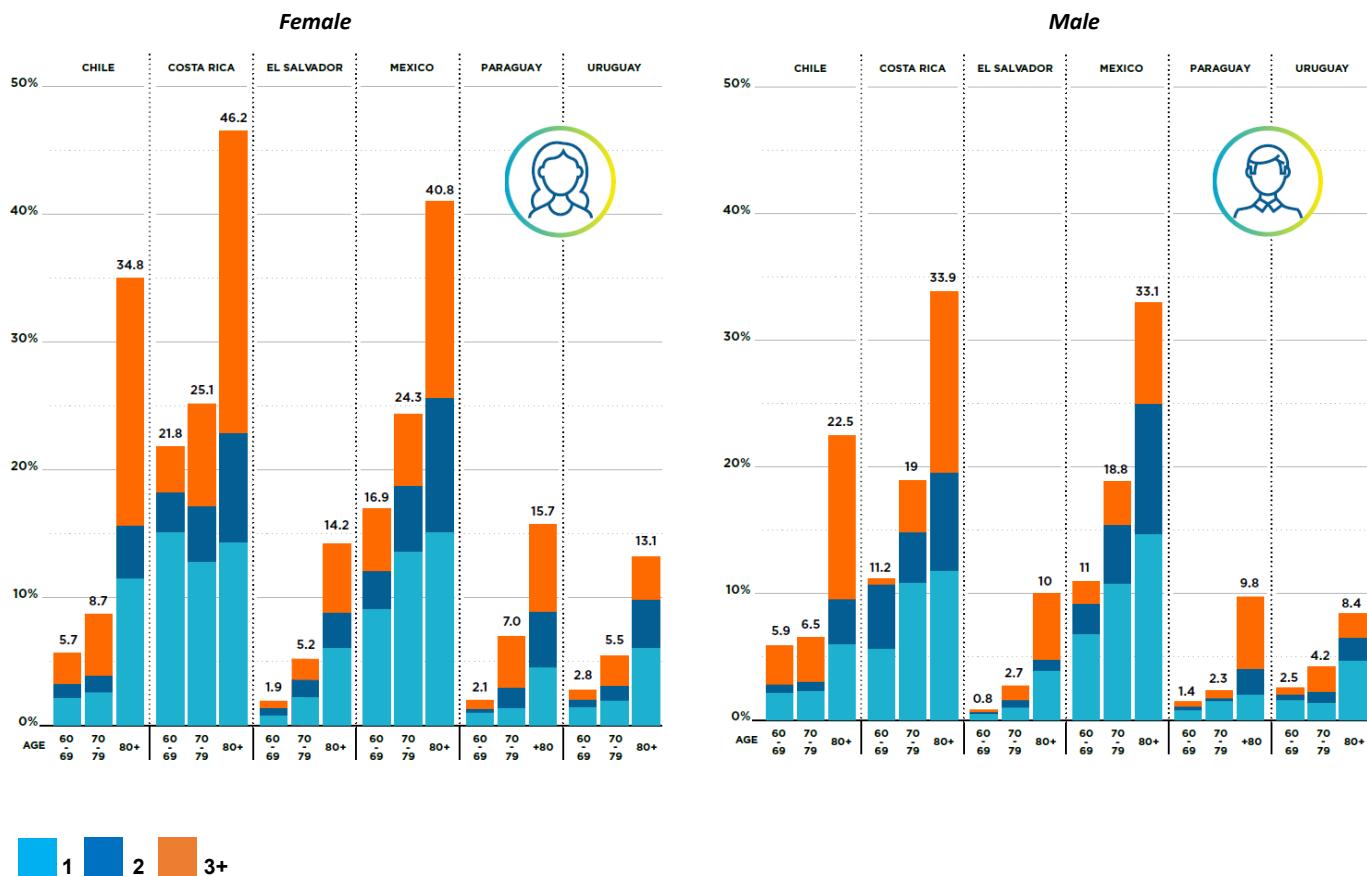
Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 25 – Annual DALYs by risk factor and world region, 1990–2019 (millions)



Source: calculations based on IHME, GHDx, accessed November 2020.

Figure 26 – Share of the population who have difficulty performing basic activities of daily living (ADL) by age and gender (%)

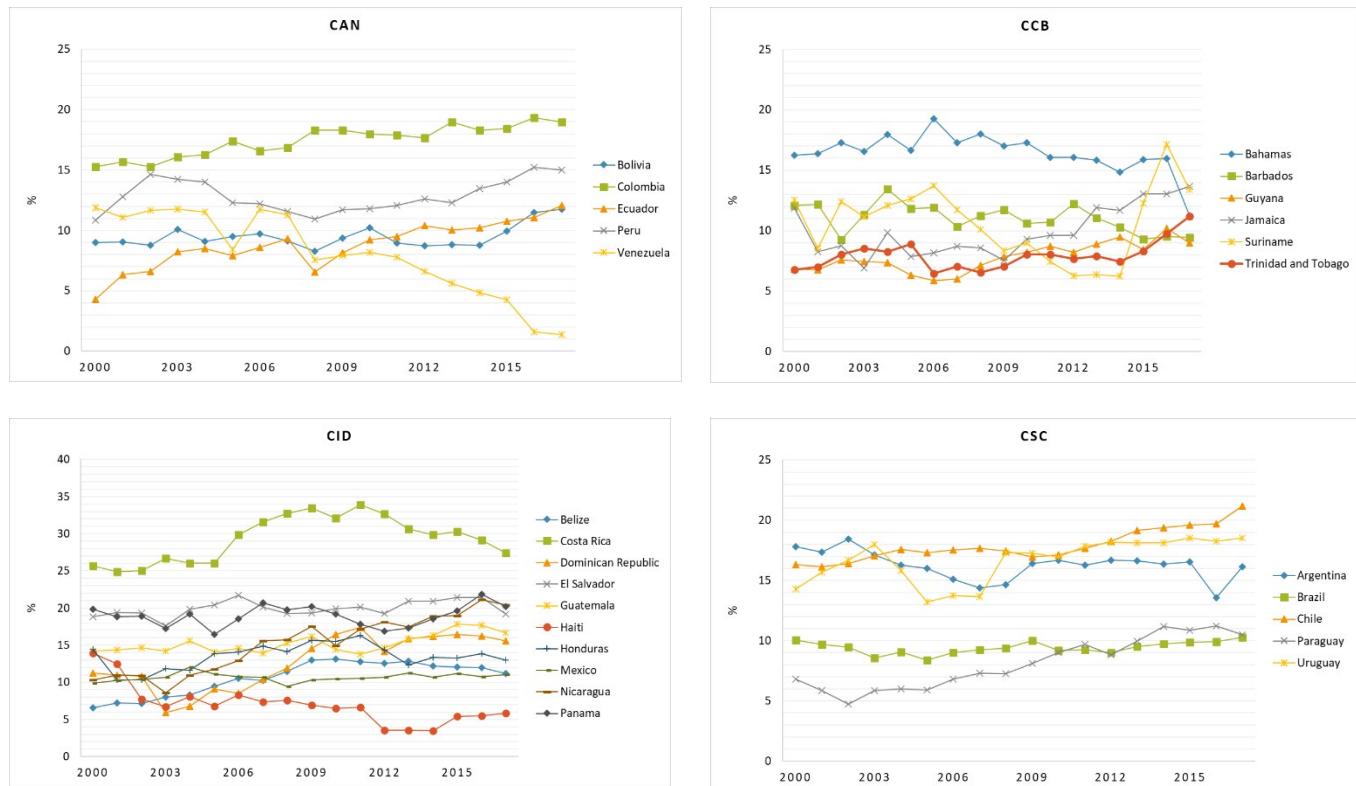


Source: Cafagna, G., Aranco, N., Pablo Ibarrarán, Oliveri, M. L., Medellín, N., Stampini. M. (2019) *Envejecer con cuidado: Atención a la dependencia en América Latina y el Caribe*. Inter-American Development Bank. <http://dx.doi.org/10.18235/0001972>

Health Expenditures

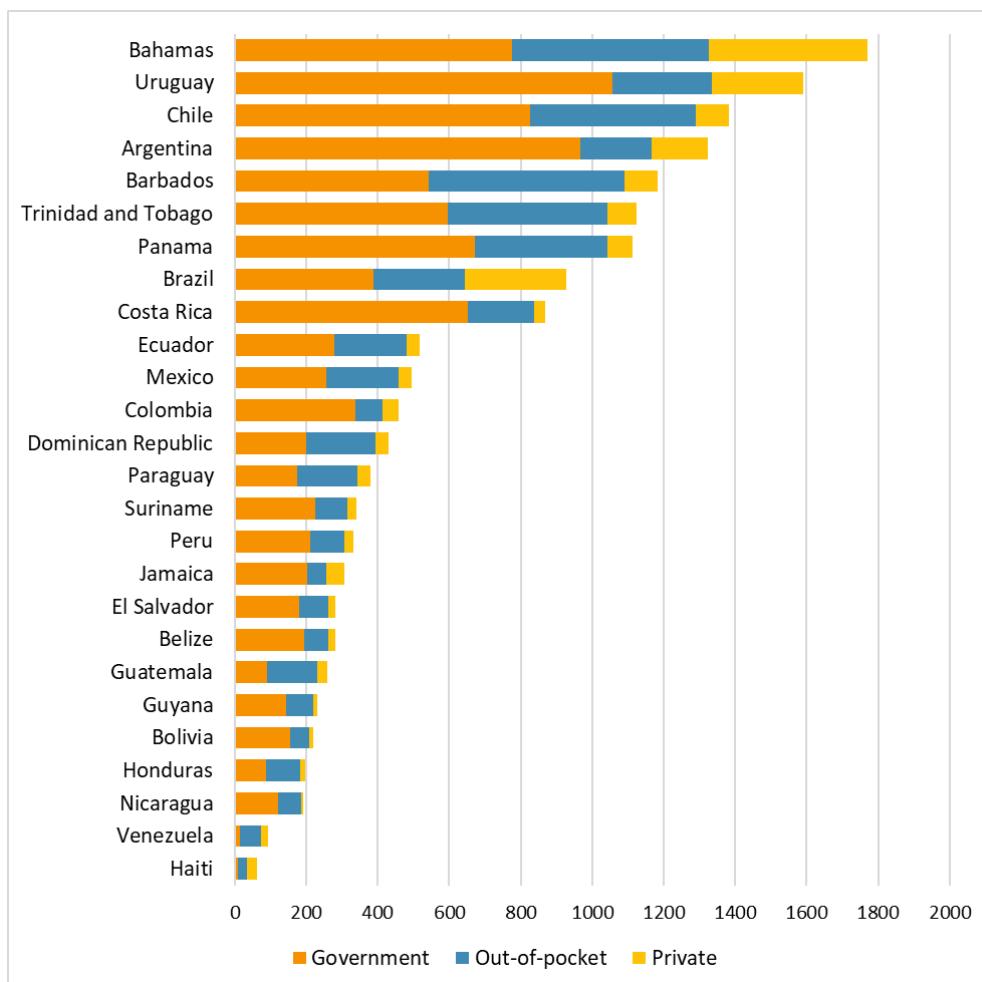
This section is based on data between 2000 and 2018 from the WHO Global Health Expenditure Database (GHED), except where otherwise noted. Includes health spending indicators and data for 190 countries. The top-level financing categories are current health expenditure (total), government and compulsory contribution health expenditures (government), household out-of-pocket payments (out-of-pocket), and voluntary health insurance payments (private).

Figure 27 - Government budget share of health expenditures in Latin America & the Caribbean, 2000–2018 (% of total govt. exp.)



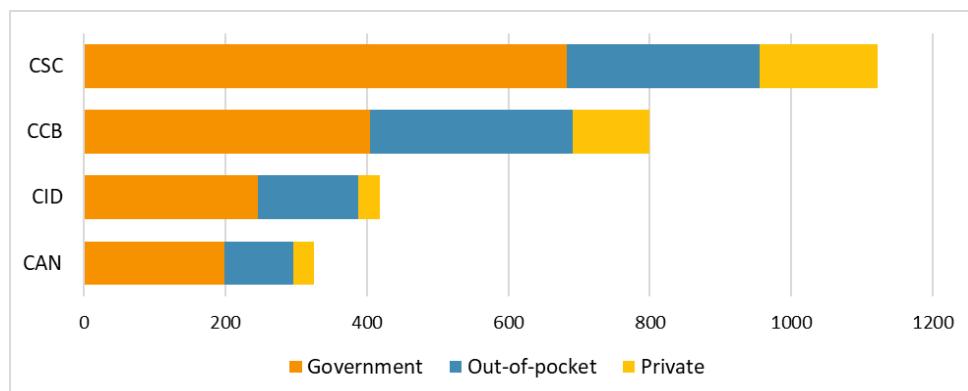
Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021.

Figure 28 – Current health expenditures per capita by country, 2018 (2018 US\$)



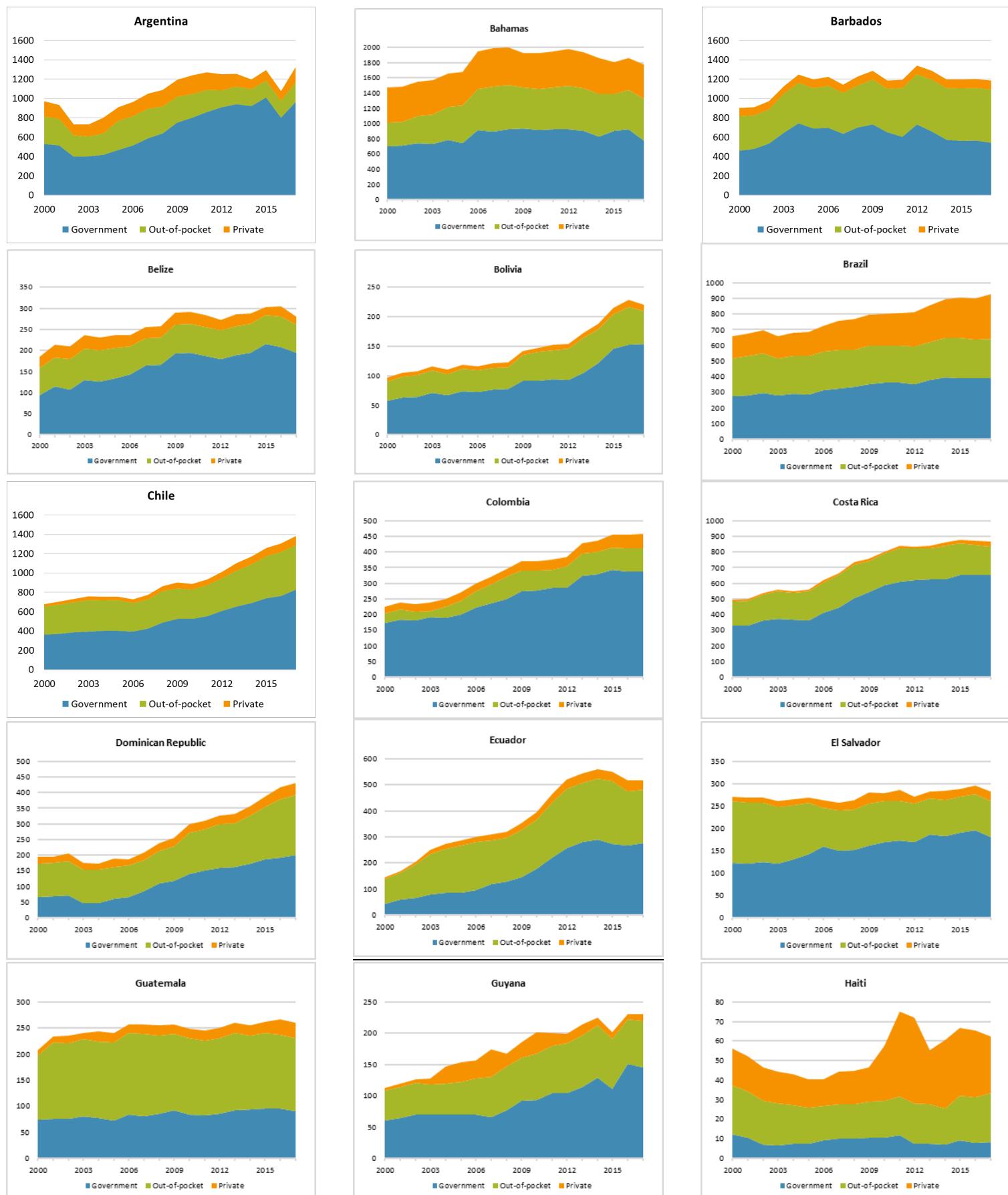
Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021. Per capita figures are presented in constant 2018 US dollars.

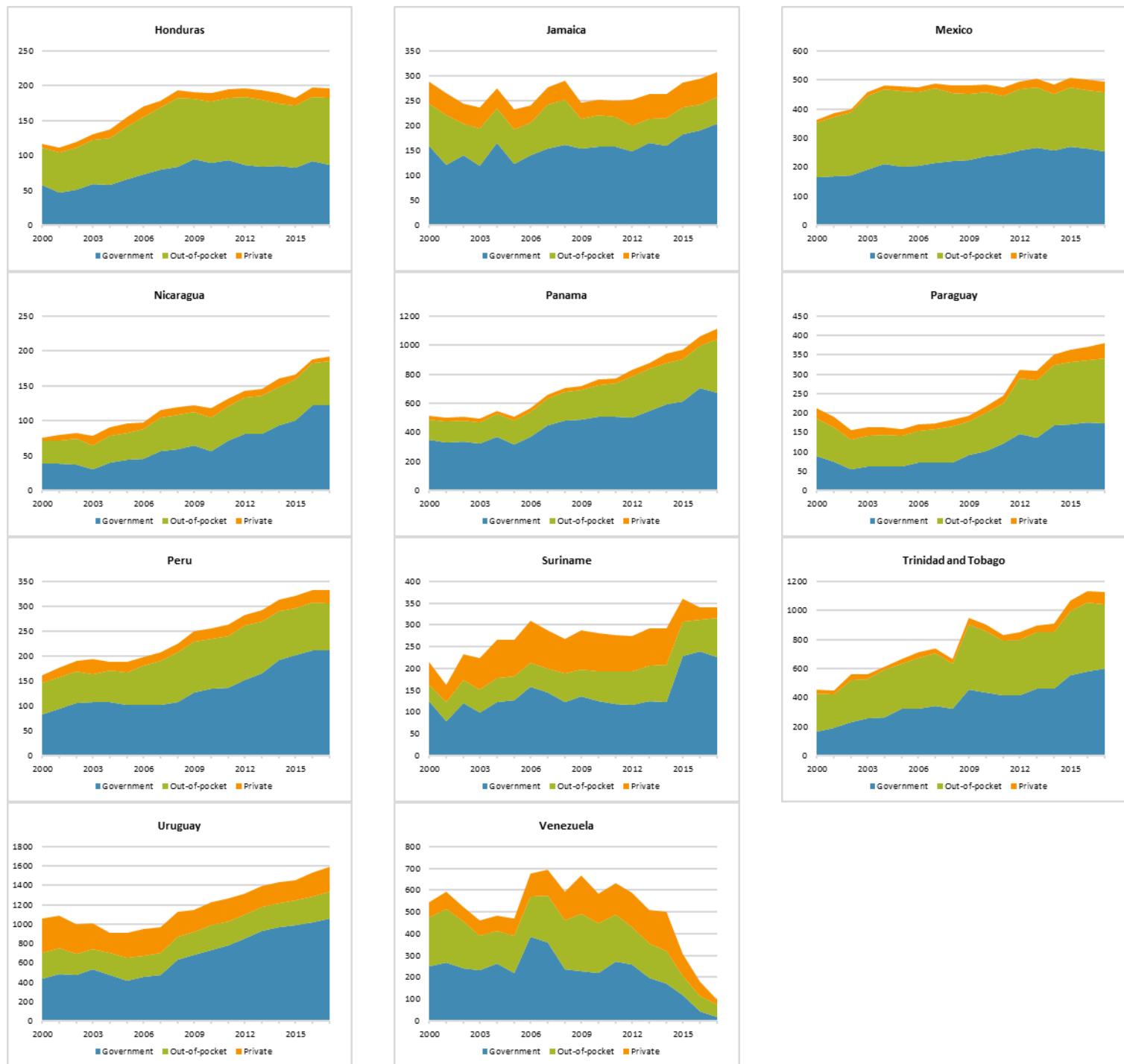
Figure 29 – Current health expenditures per capita by IDB region, 2018 (2018 US\$)



Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021. Per capita figures are presented in constant 2018 US dollars.

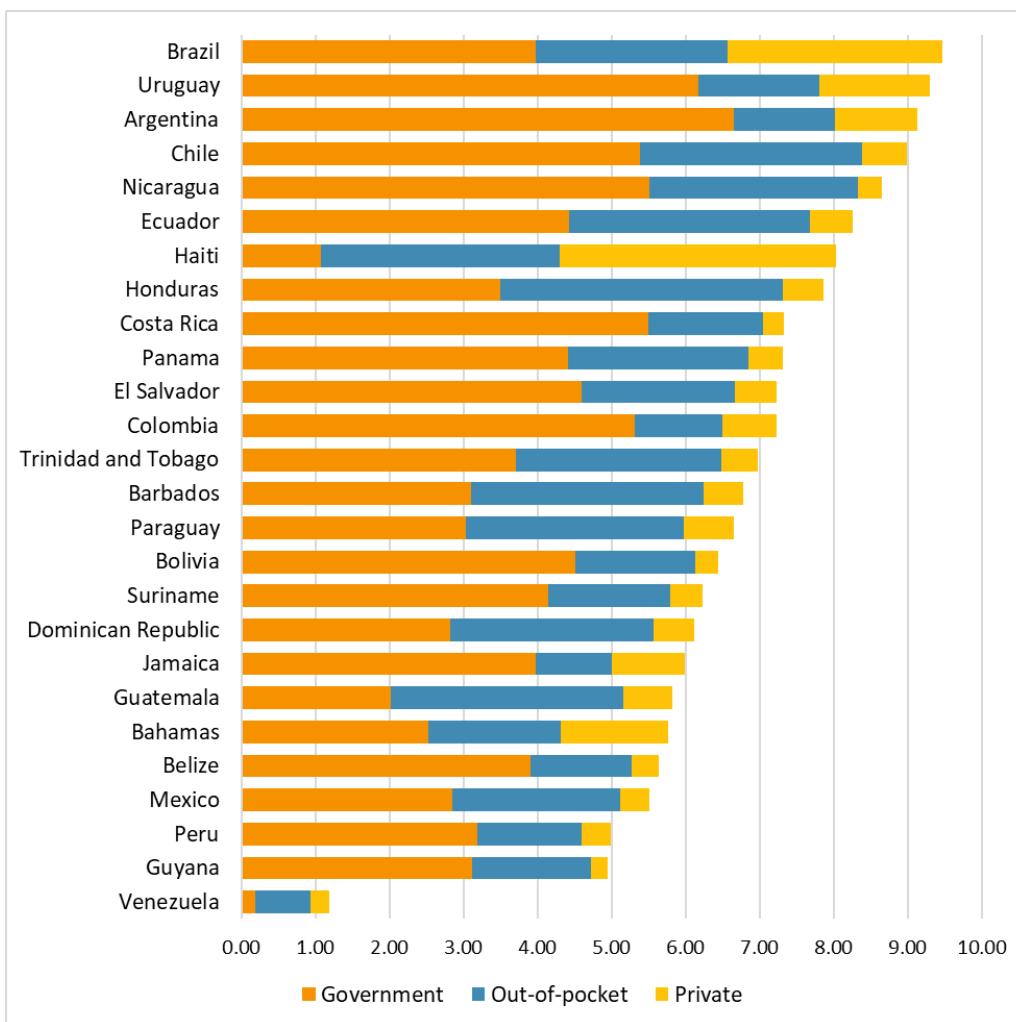
Figure 30 - Current health expenditures per capita by country, 1990–2018 (2018 US\$)





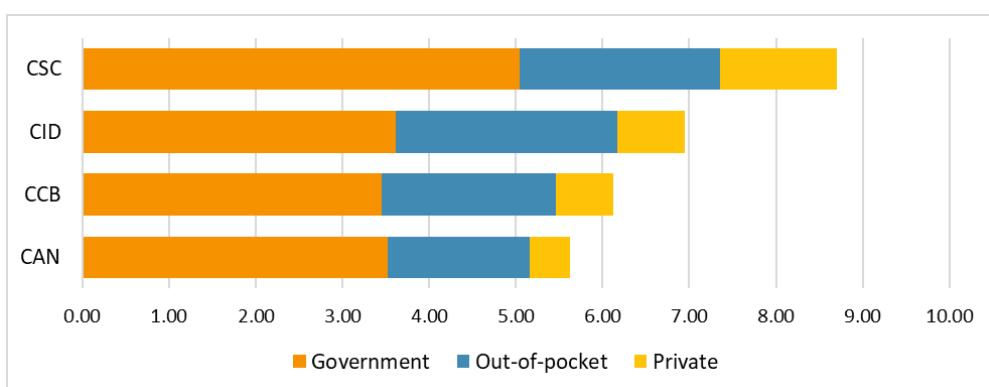
Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021. Per capita figures are presented in constant 2018 US dollars.

Figure 31 – Current health expenditures by country, 1990 - 2018 (Share of GDP - %)



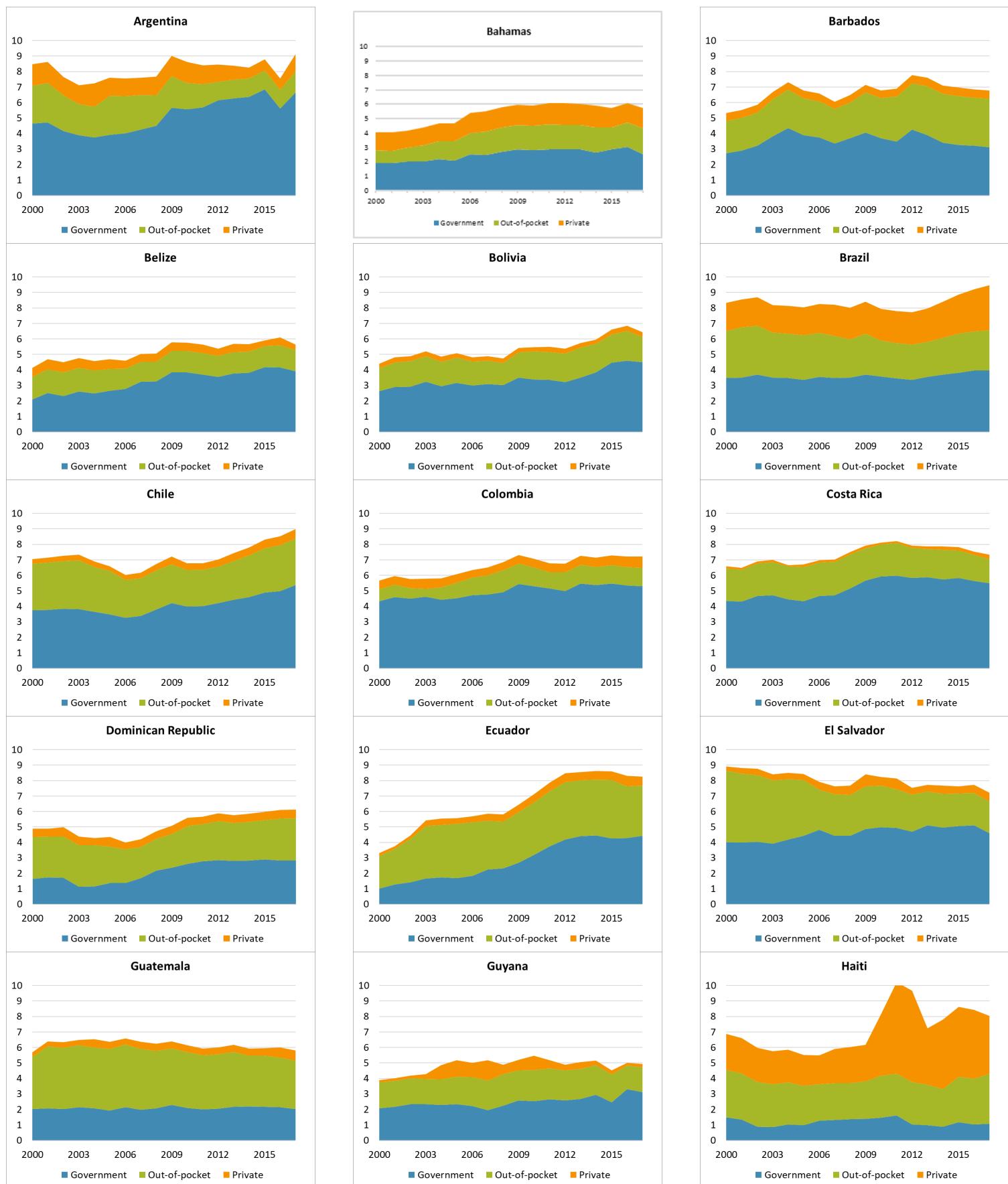
Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021.

Figure 32 – Current health expenditures by IDB region, 1990 - 2018 (Share of GDP - %)



Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021.

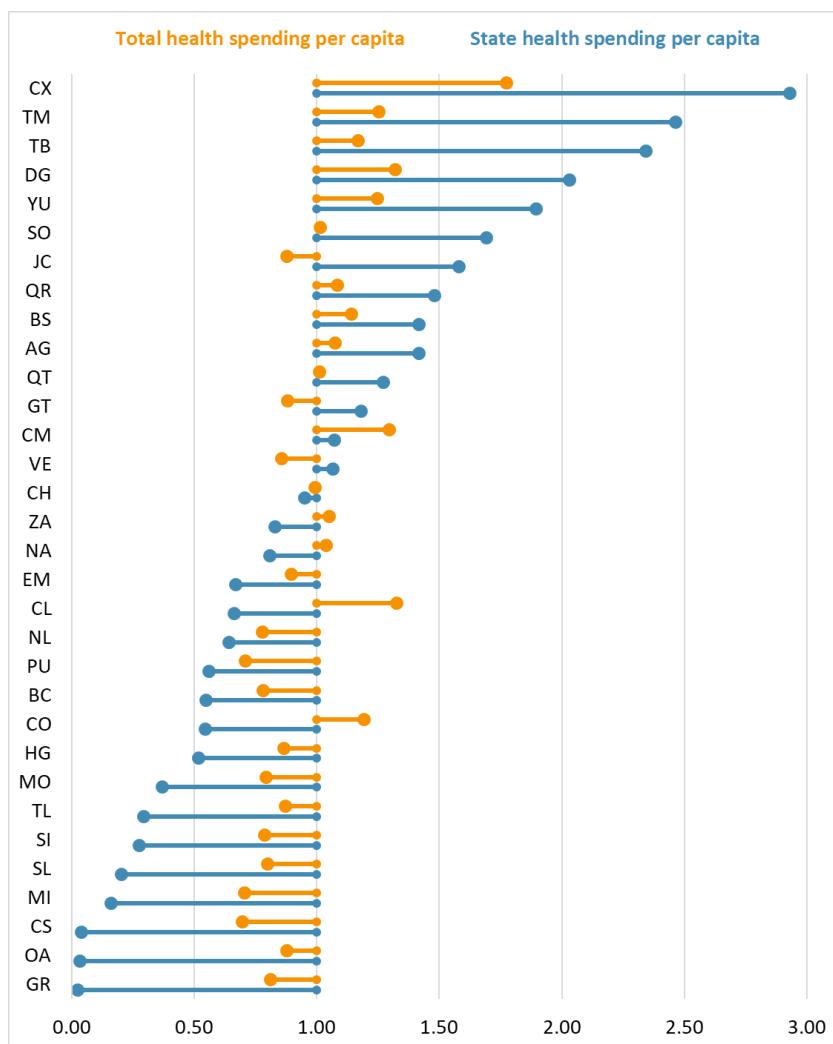
Figure 33 - Current health expenditures by country, 1990 - 2018 (Share of GDP - %)





Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021.

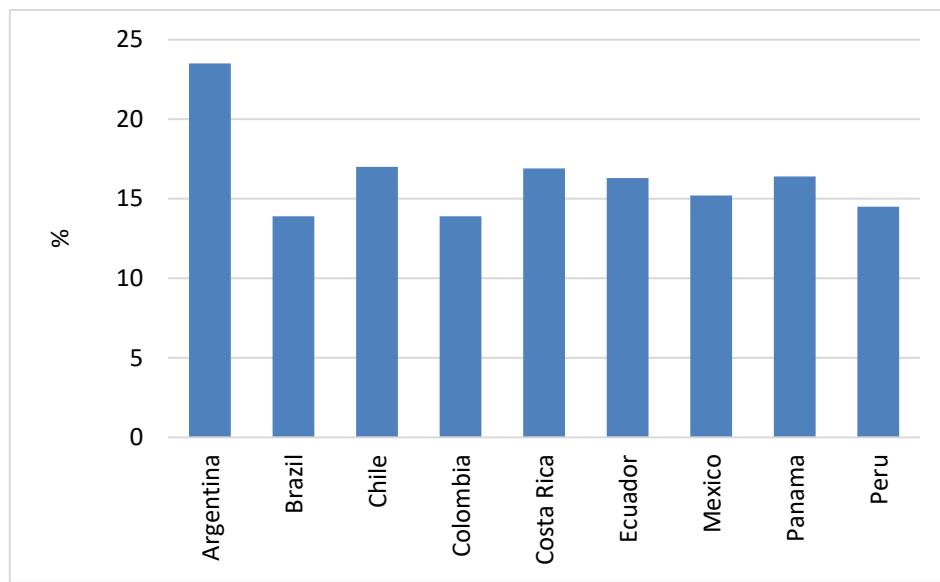
Figure 34 – Variation in federal and state per capita health spending in Mexico, 2017



Source: Gasto en Salud en el Sistema Nacional de Salud. Dirección General de Información en Salud, Secretaría de Salud. Gobierno de México. Retrieved from http://www.dgis.salud.gob.mx/contenidos/sinais/gastoensalud_gobmx.html

Notes: (1) Data is normalized by dividing state or federal per capita spending by the average per capita spending. For example, this shows that state spending in Mexico City (CX) is 3 times the average of per capita state spending.
(2) Figures are for state and federal spending on the population "without insurance" only.

Figure 35 - Drug expenditure as share of total health expenditure, 2016 (%)

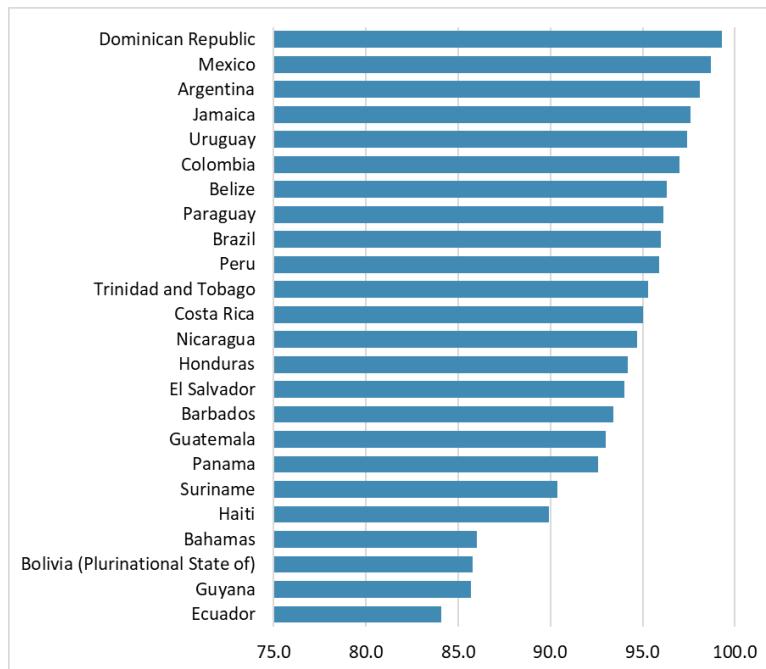


Source: calculated based on Kanavos, P., Colville Parkin, G., Kamphuis, B., Gill, J. (2019). Latin America Healthcare System Overview: A comparative analysis of fiscal space in health care. London School of Economics and Political Science (LSE).

Coverage

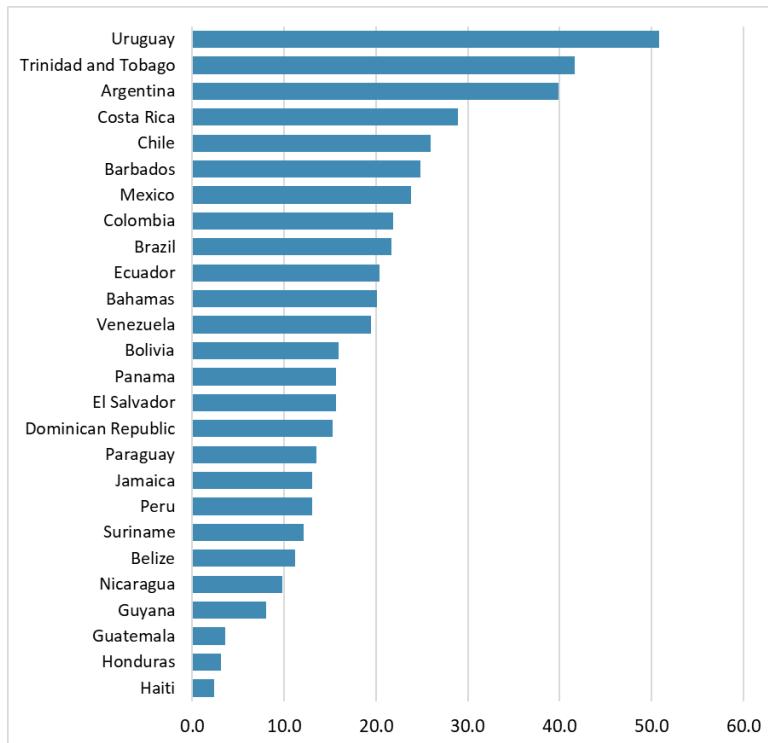
This section is based on country indicators and statistics between 2000 and 2018 from the WHO Global Health Observatory (GHO). Indicators are not available for the same years for all countries across Latin American and the Caribbean; figures present the most recent calculation. GHO includes indicators about mortality, health systems violence, among others. The following figures include health coverage indicators such as antenatal care coverage, hospital beds, etc.

Figure 36 – Antenatal care coverage – at least one visit (%)



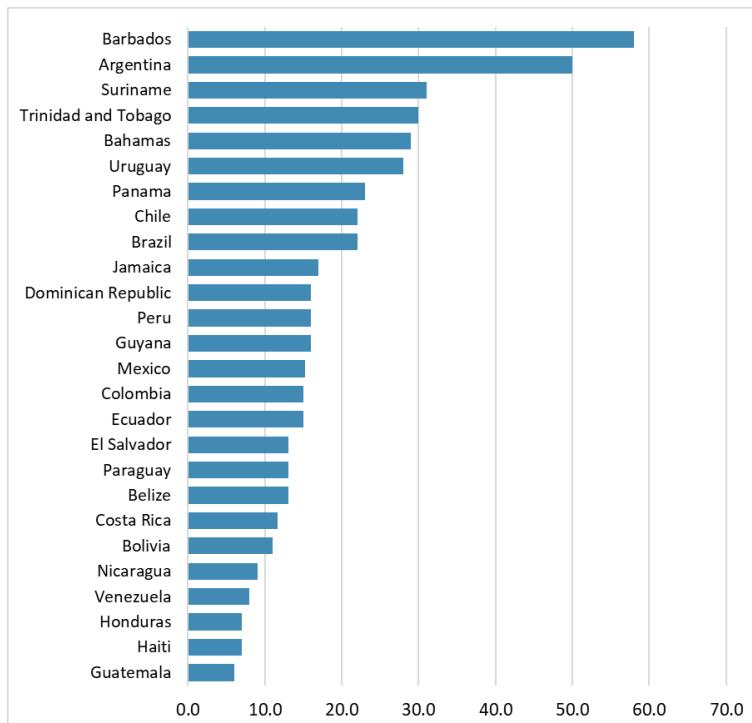
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Figure presents the most recent calculation between 2000 and 2018. Indicators are not available for the same years for all countries across Latin American and the Caribbean.

Figure 37 – Medical doctors (per 10,000 population)



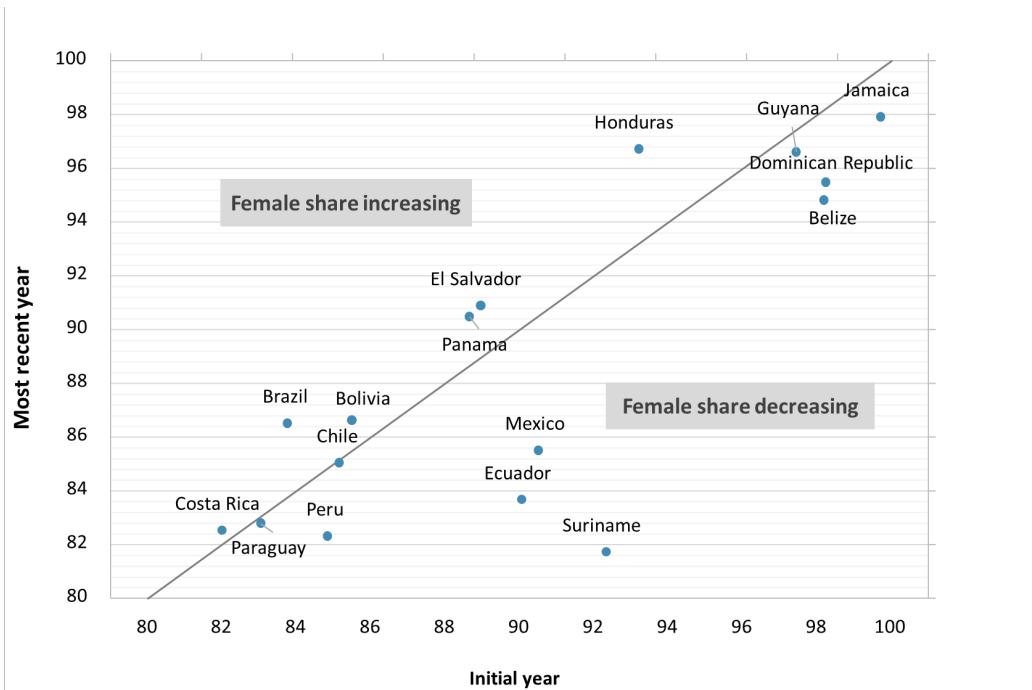
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Figure presents the most recent calculation between 2000 and 2018. Indicators are not available for the same years for all countries across Latin America and the Caribbean.

Figure 38 – Hospital beds (per 10,000 population)



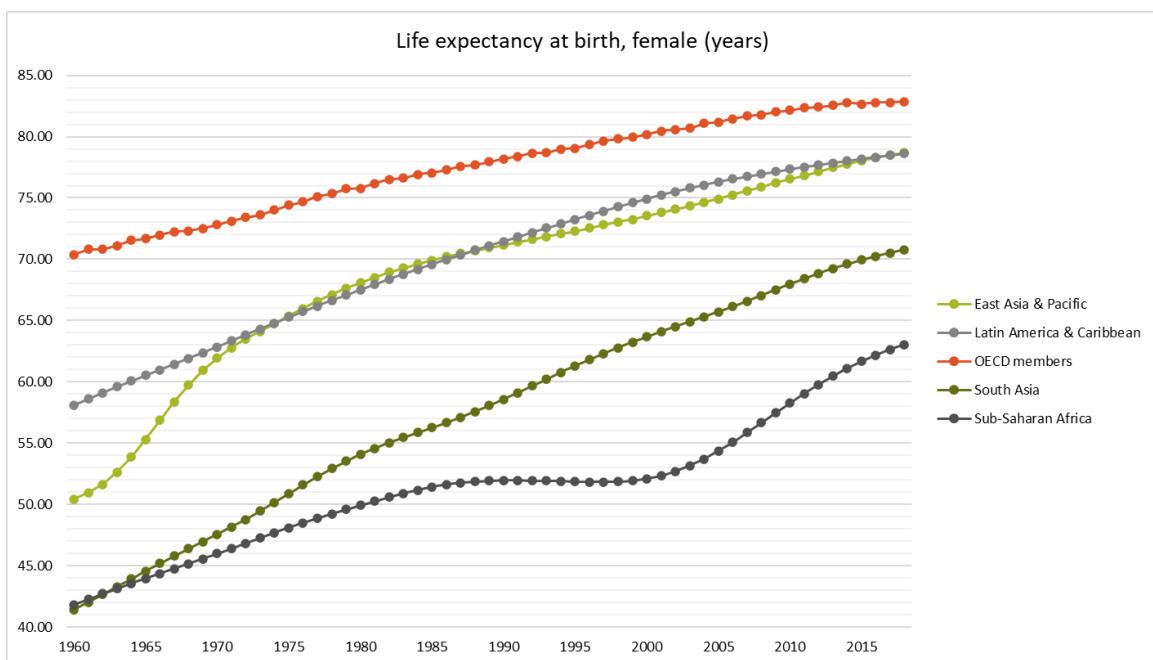
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Figure presents the most recent calculation between 2000 and 2018. Indicators are not available for the same years for all countries across Latin America and the Caribbean.

Figure 39 – Female share of nurses, earliest vs. most recent observation (%)



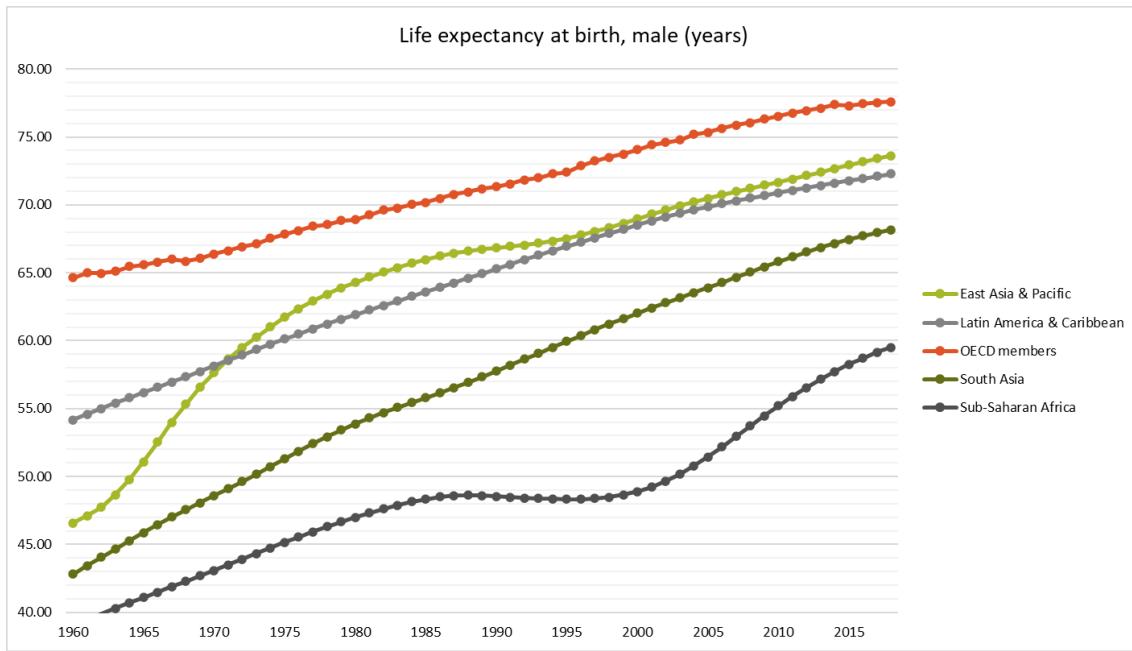
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Figure presents the most recent calculation between 2000 and 2018. Indicators are not available for the same years for all countries across Latin American and the Caribbean.

Figure 40 – Life expectancy at birth by world region, female (years)



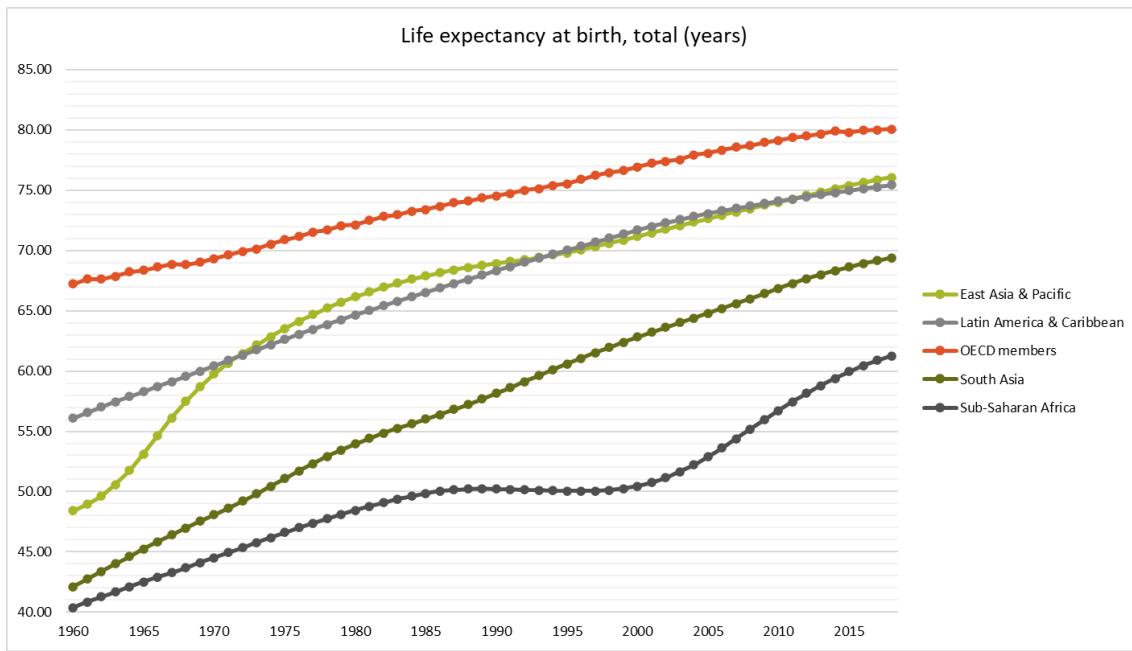
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020.

Figure 41 – Life expectancy at birth by world region, male (years)



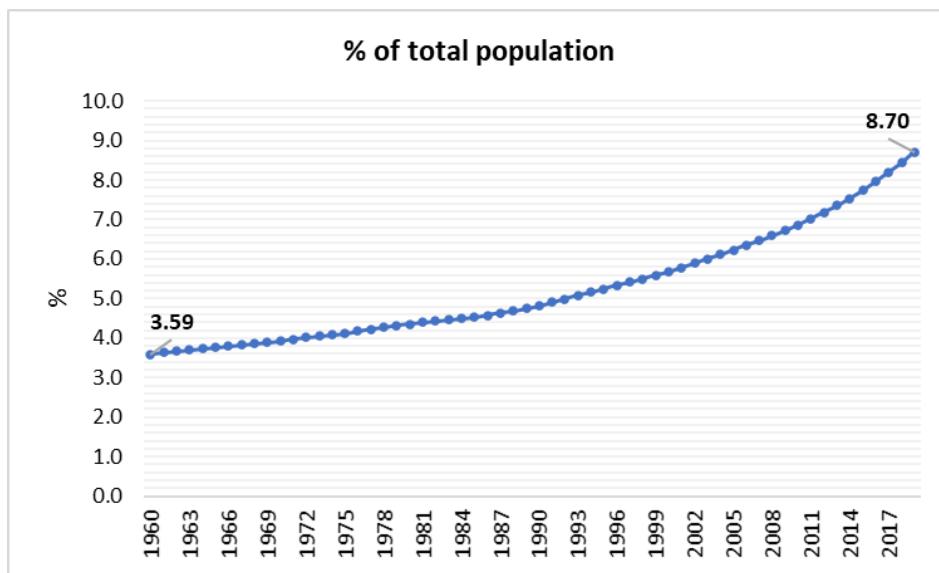
Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020.

Figure 42 – Life expectancy at birth by world region (years)



Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020.

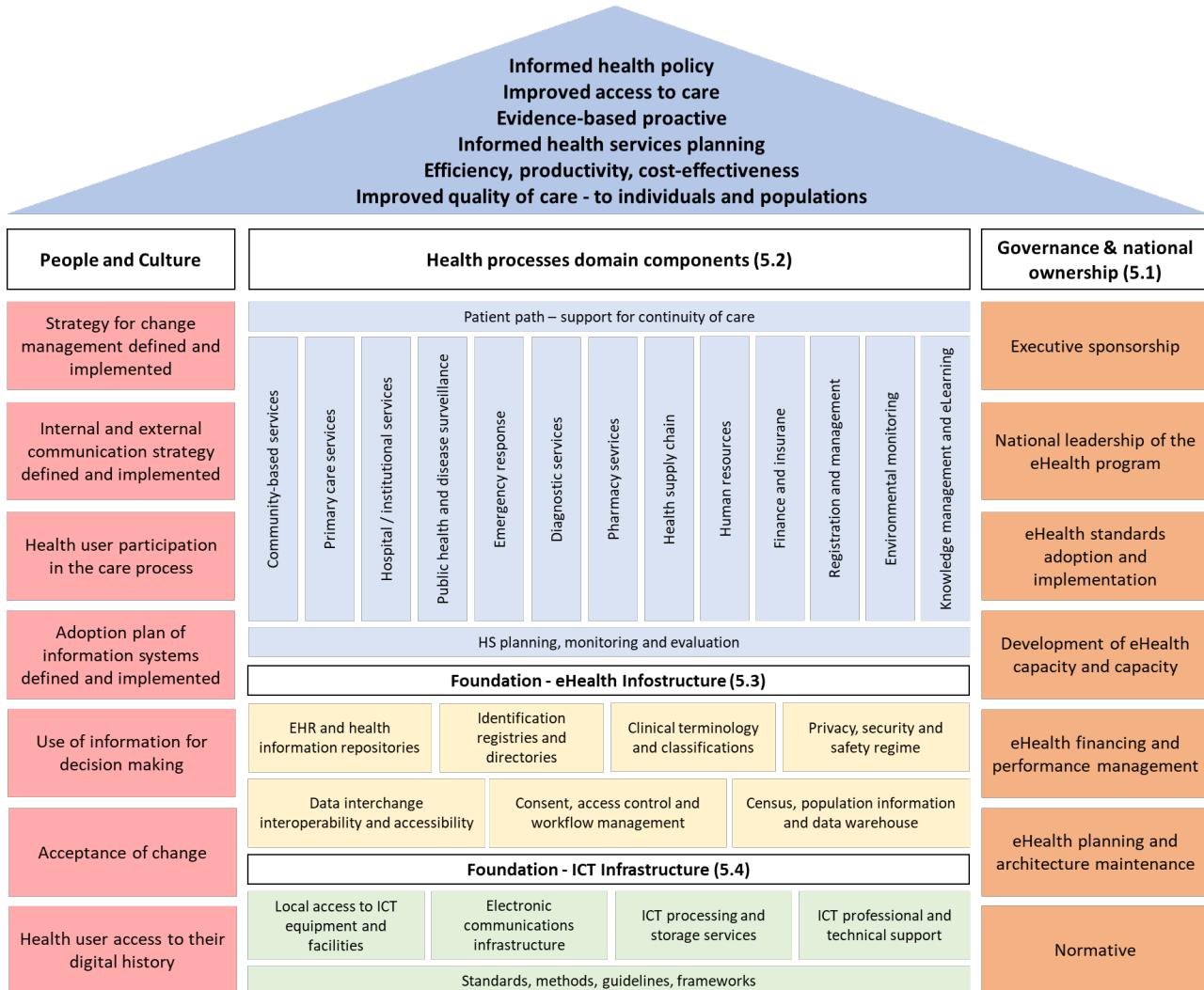
Figure 43 - Population aged 65 and above in LAC (% of total population): 1960-2019



Source: calculation based on World Bank, accessed July 2020.

Digital Health

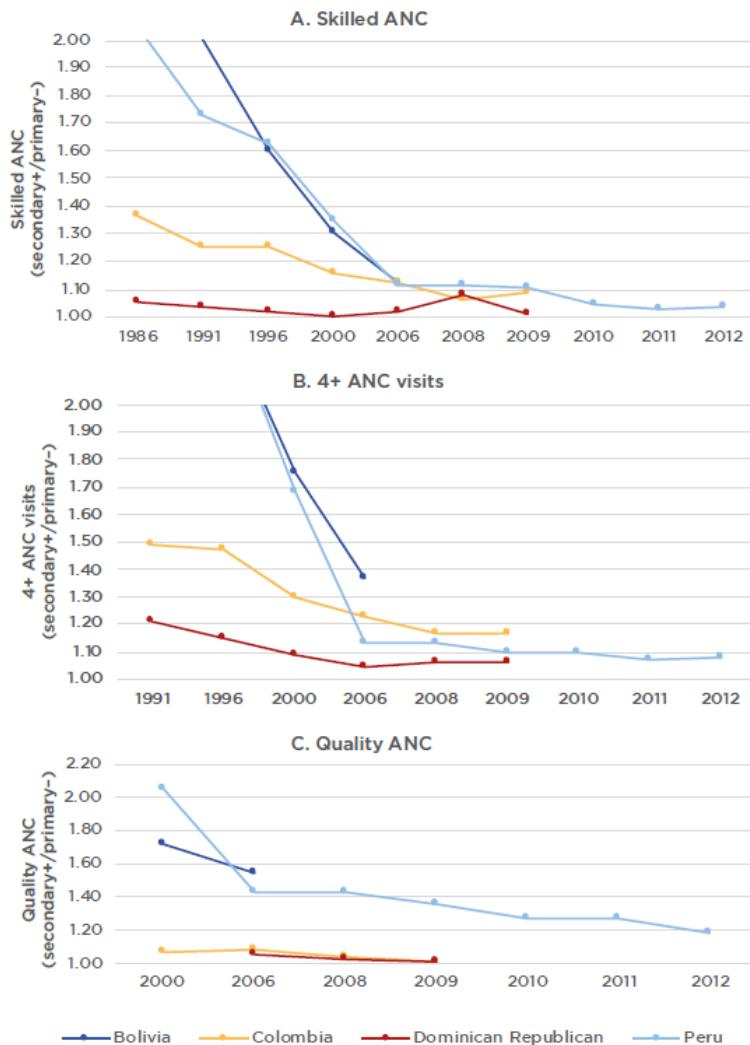
Figure 44 - eHealth architecture model



Source: Adaptation of ISO/TR 14639-2, Health informatics – Capacity based eHealth architecture roadmap – Part 2 Architectural components and maturity model. P. 21. Figure 4 - eHealth architecture model.

Inequality

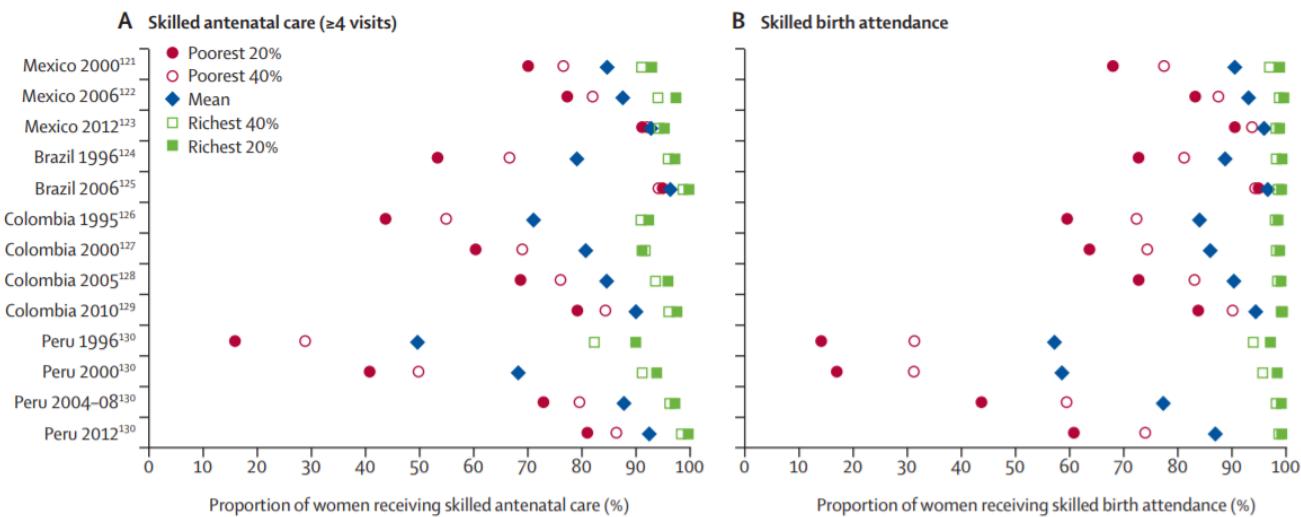
Figure 45 – Antenatal care inputs



Source: Busso, M; Messina, K. (2020). Figure 6.5. P. 133

Note: Figures show the ratio between pregnant women with secondary education or more relative to those with primary education or less as a proxy for income and social class.

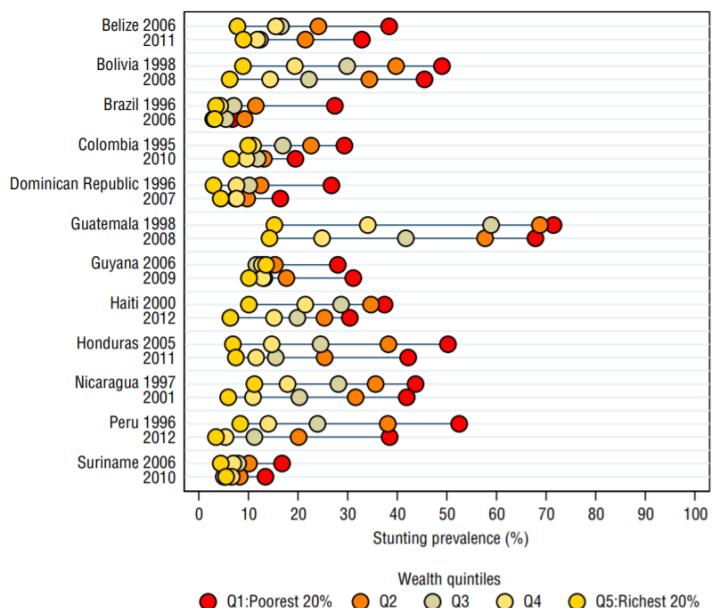
Figure 46 – Coverage of maternal health services



Source: Atun, R. et al. (2020). Figure 6. P. 385.

Note: "Data are from 1995 to 2012 or the nearest year. Grouping of poorest and richest population segments represents the framework proposed by WHO and the World Bank Group.120 Countries are ranked from highest to lowest mean level of skilled birth attendance for the latest year."

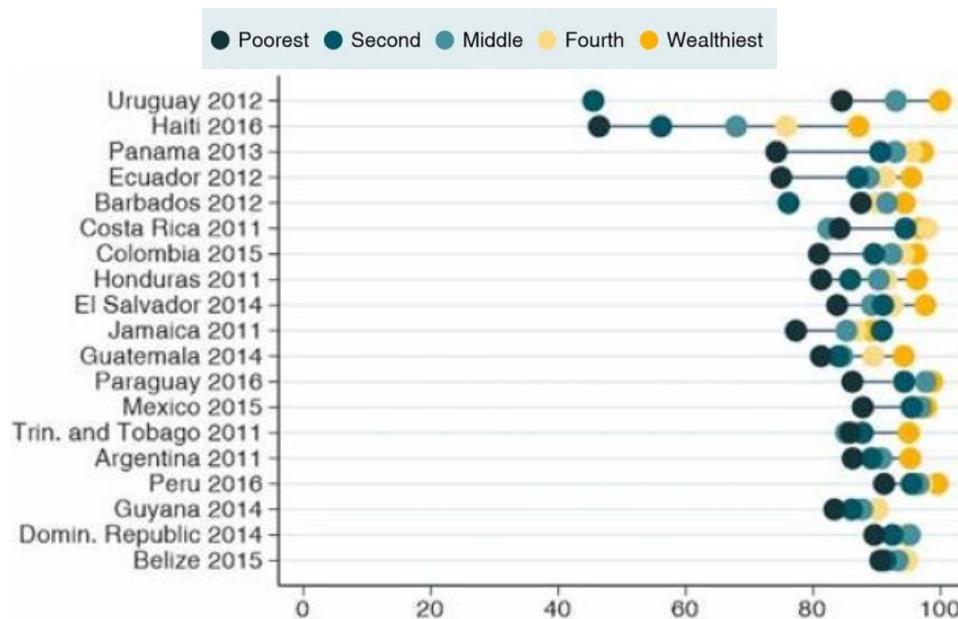
Figure 47 – Stunting prevalence in children 5 years of age stratified according to wealth quintiles



Note: The horizontal lines connect the poorest (red circles) and richest (gold circles) quintiles. The longer the line between the two groups, the greater the absolute inequality. For quintiles with small sample sizes, estimates are not shown in the graphs.

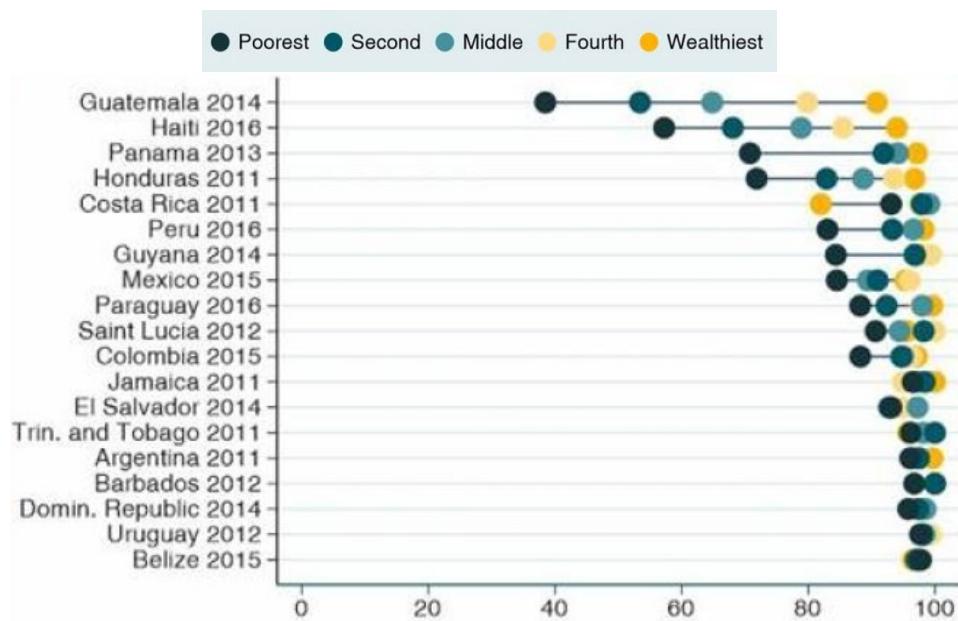
Source: Restrepo-Mendez, M.C., et al. (2015), Figure 1, P. 13, based on surveys of 11 countries in LAC.

Figure 48 – Antenatal care (4 or more visits) (%)



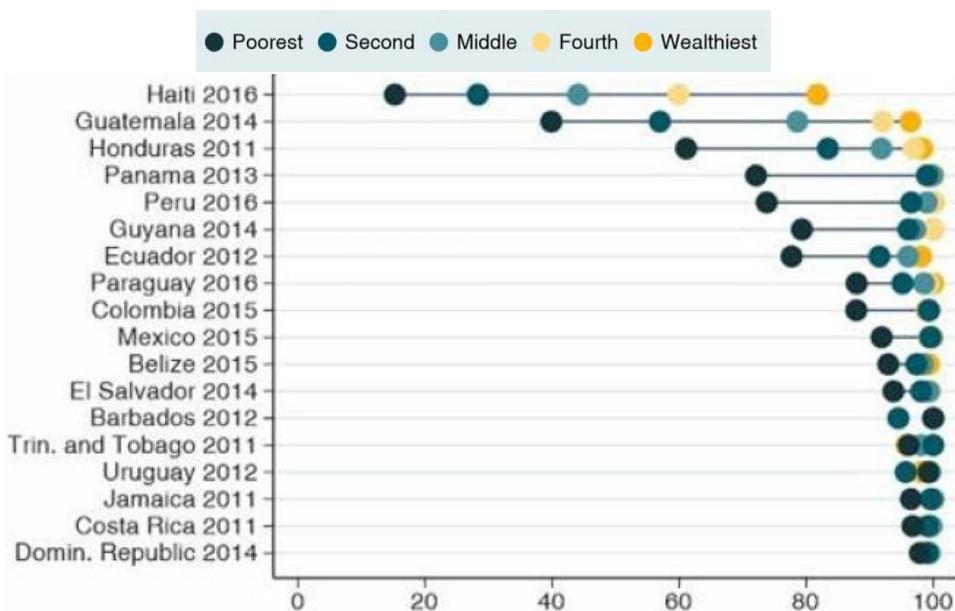
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at SSRN: <https://ssrn.com/abstract=3726176> or <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 49 – Antenatal care quality (blood and urine test, blood pressure) (%)



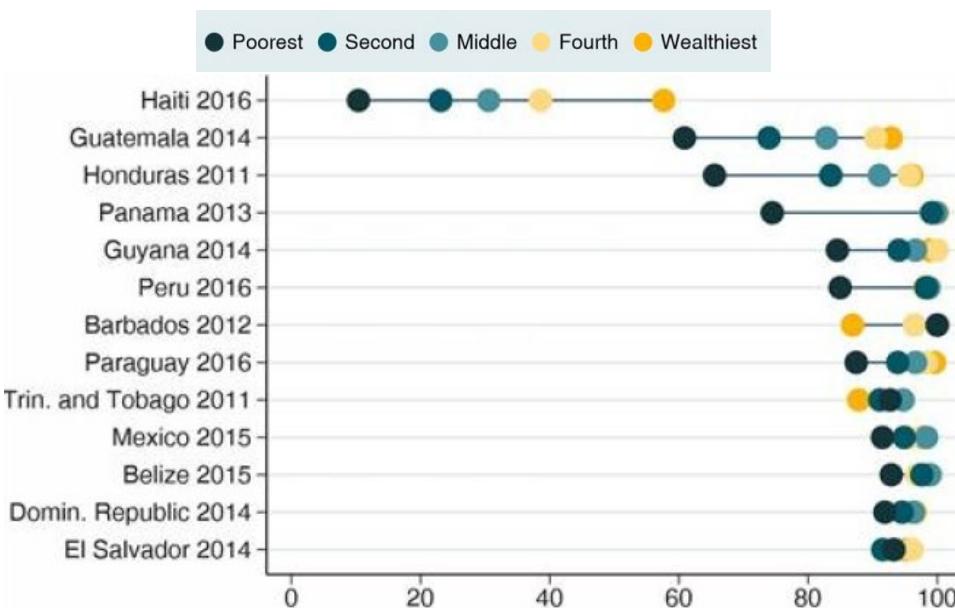
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 50 – Skilled attendant at delivery (%)



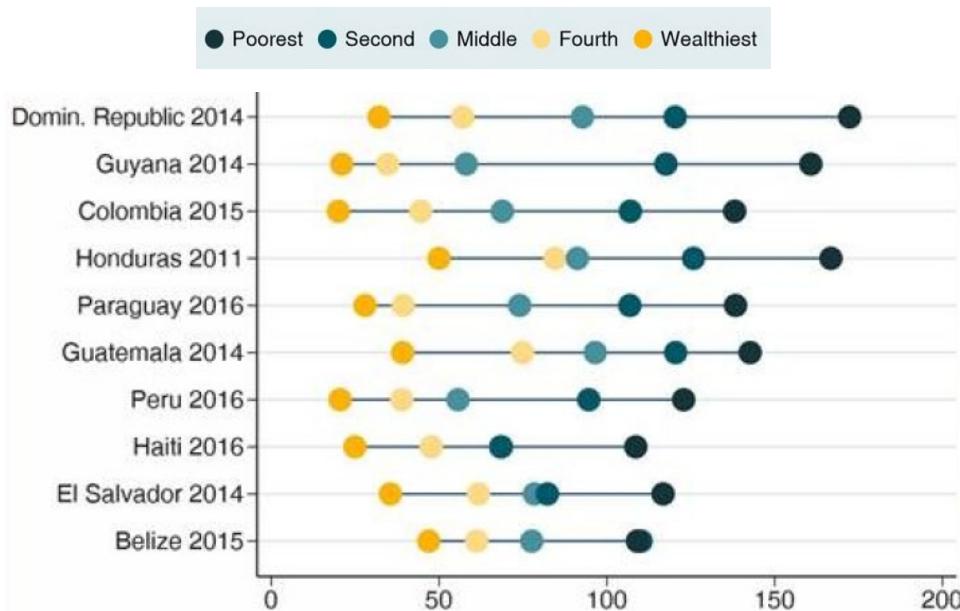
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 51 – Postnatal care for the mother (%)



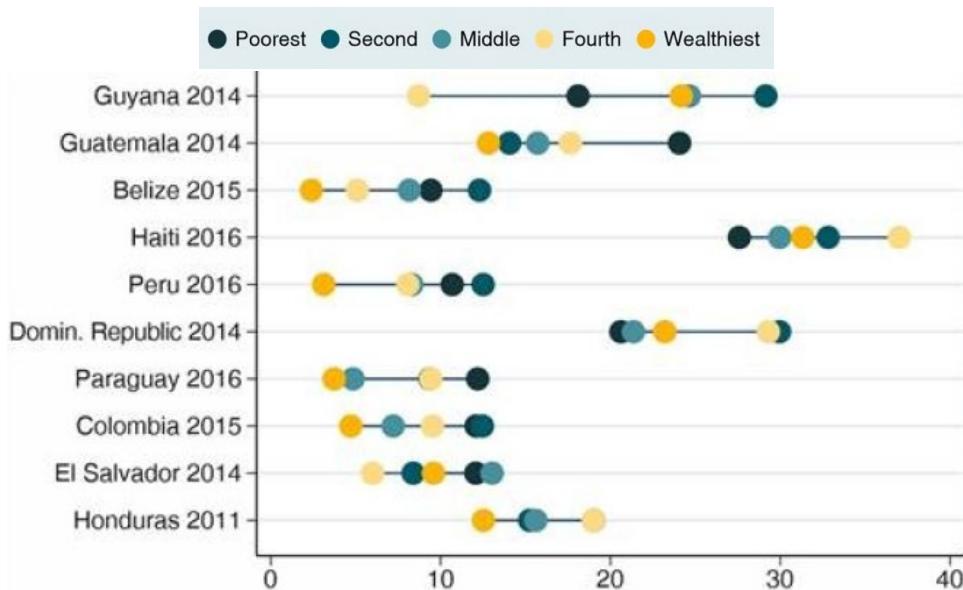
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 52 – Adolescent fertility rate, 15-19 years (per 1,000 woman-years)



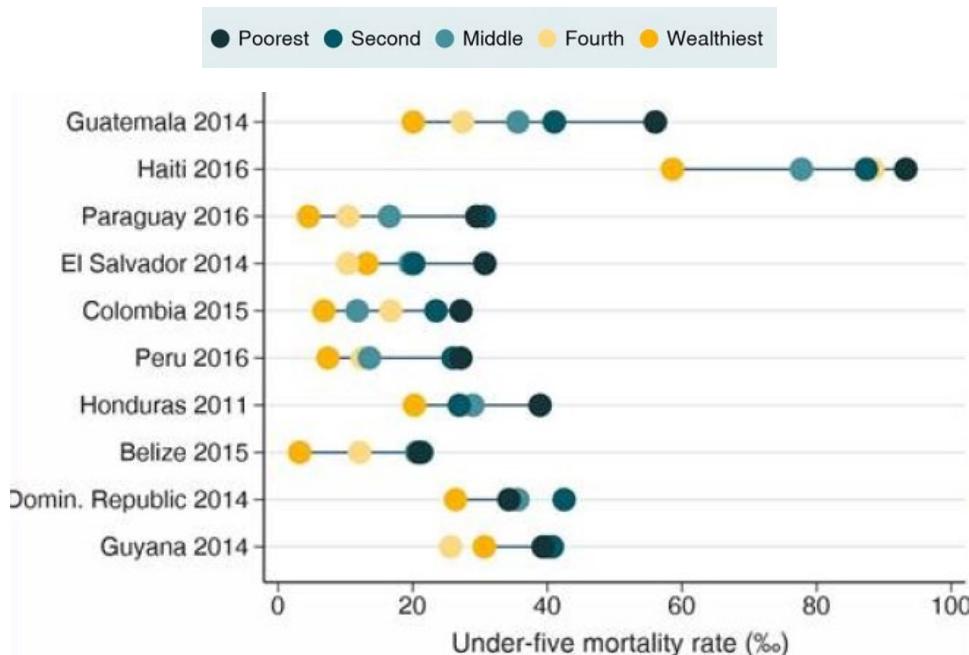
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 53 – Neonatal mortality rate (%)



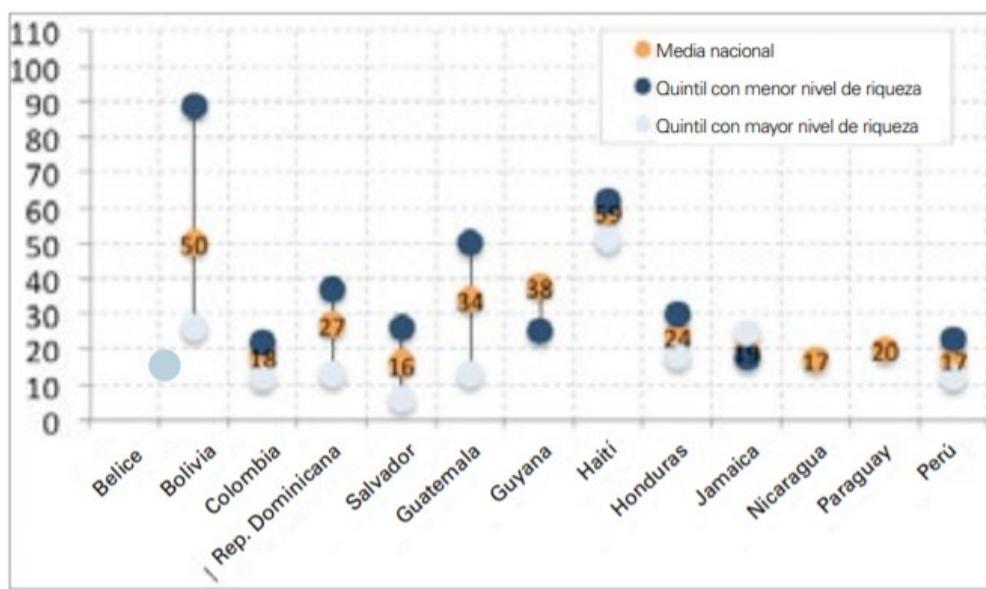
Source: Sanhueza, A et al. (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 54 – Under-five mortality rate (%)



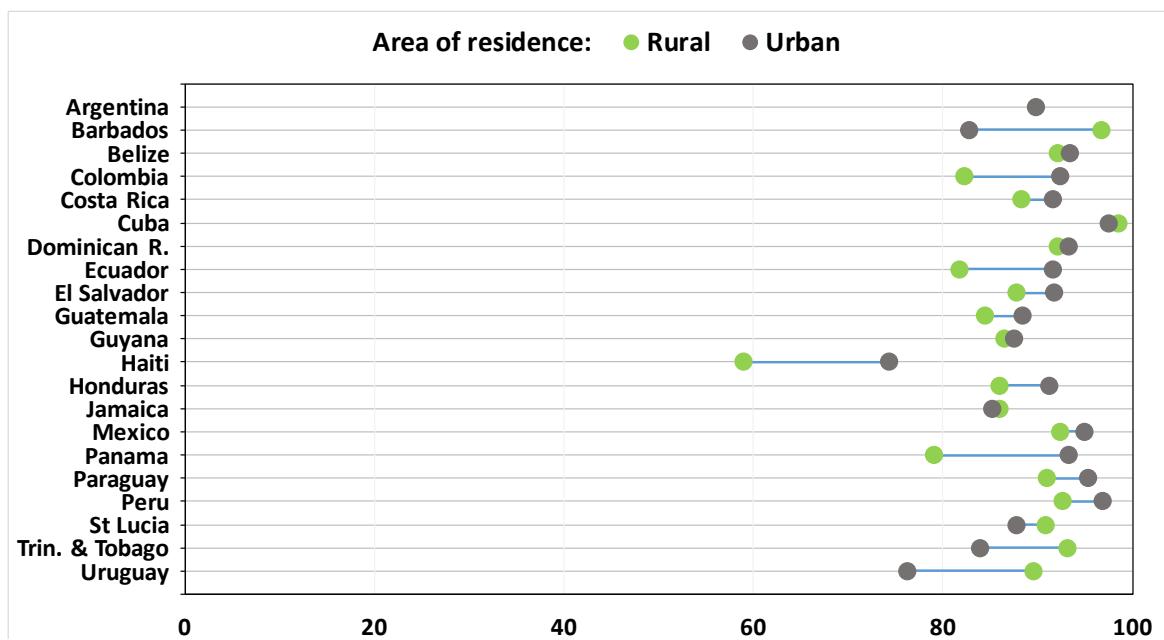
Source: Sanhueza, A et al (2020), *SDG3-Related Inequalities in Women's, Children's, and Adolescents' Health: A Baseline for Latin America and the Caribbean*. Available at <http://dx.doi.org/10.2139/ssrn.3726176>.

Figure 55 – Infant mortality rate (%)



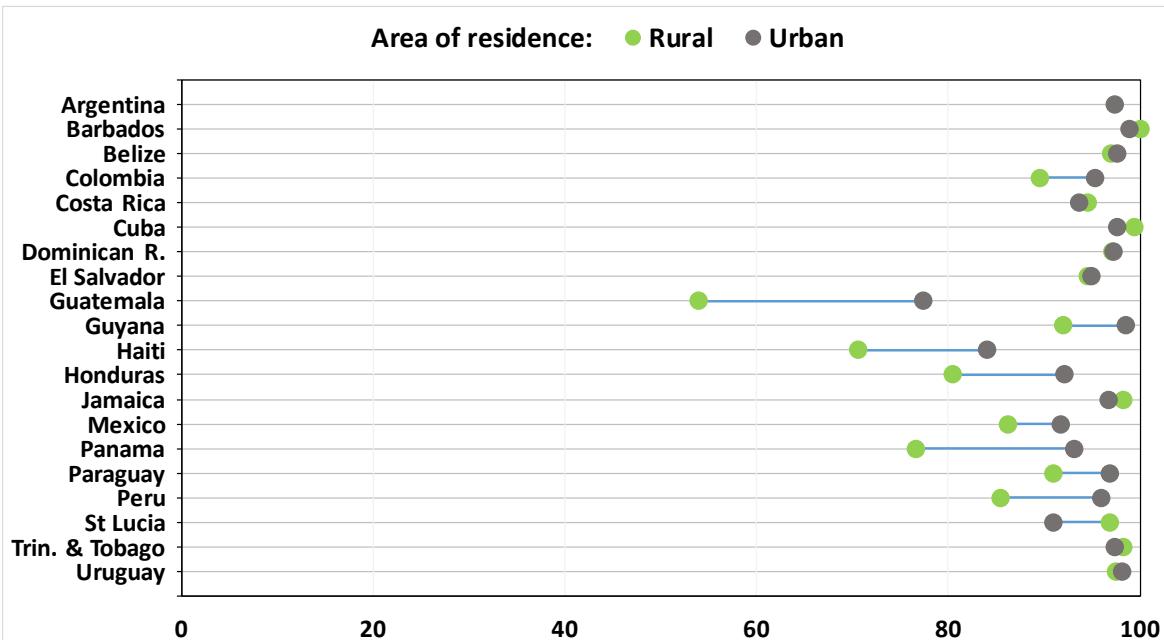
Source: UNICEF. 2016. "Informe sobre Equidad en Salud 2016: Un análisis de las inequidades en salud reproductiva, materna, neonatal, de la niñez y de la adolescencia en América Latina y el Caribe para guiar la formulación de políticas." Panama City: UNICEF. November.

Figure 56 – Antenatal care (4 or more visits) (%)



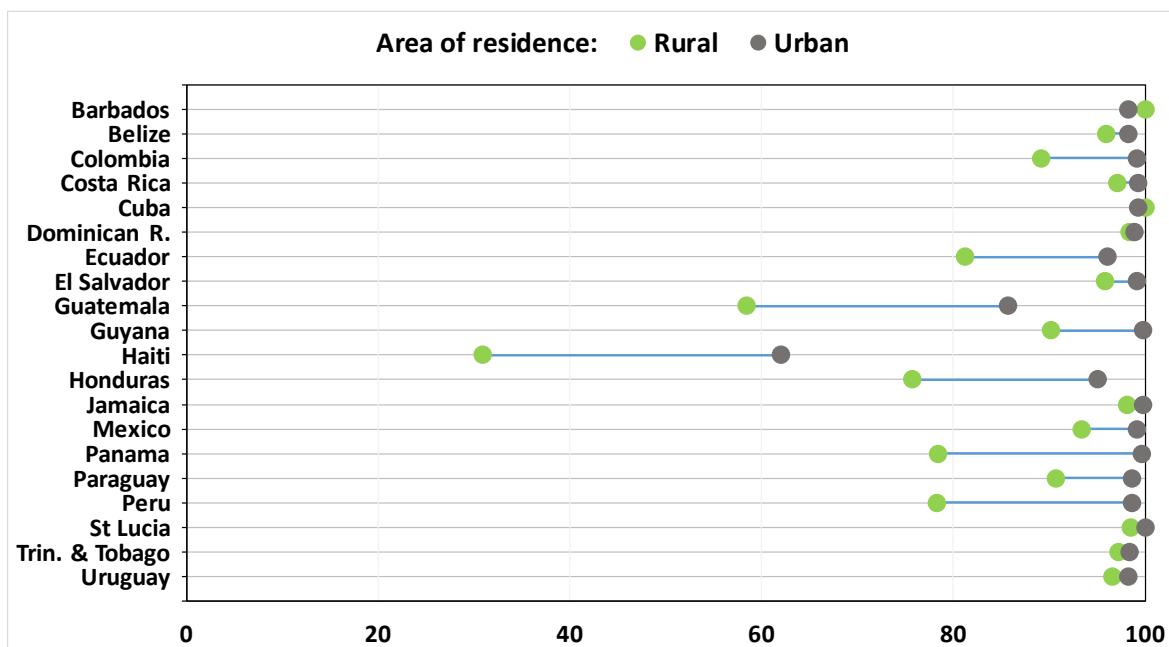
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region.

Figure 57 – Antenatal care quality (blood and urine test, blood pressure) (%)



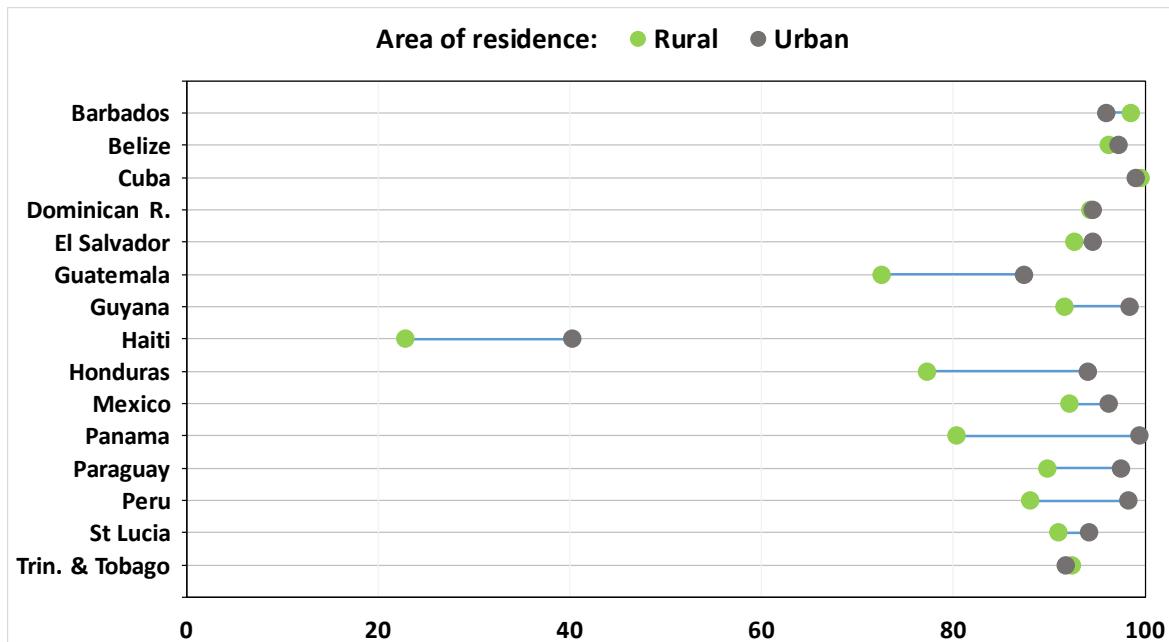
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region.

Figure 58 – Skilled attendant at delivery (%)



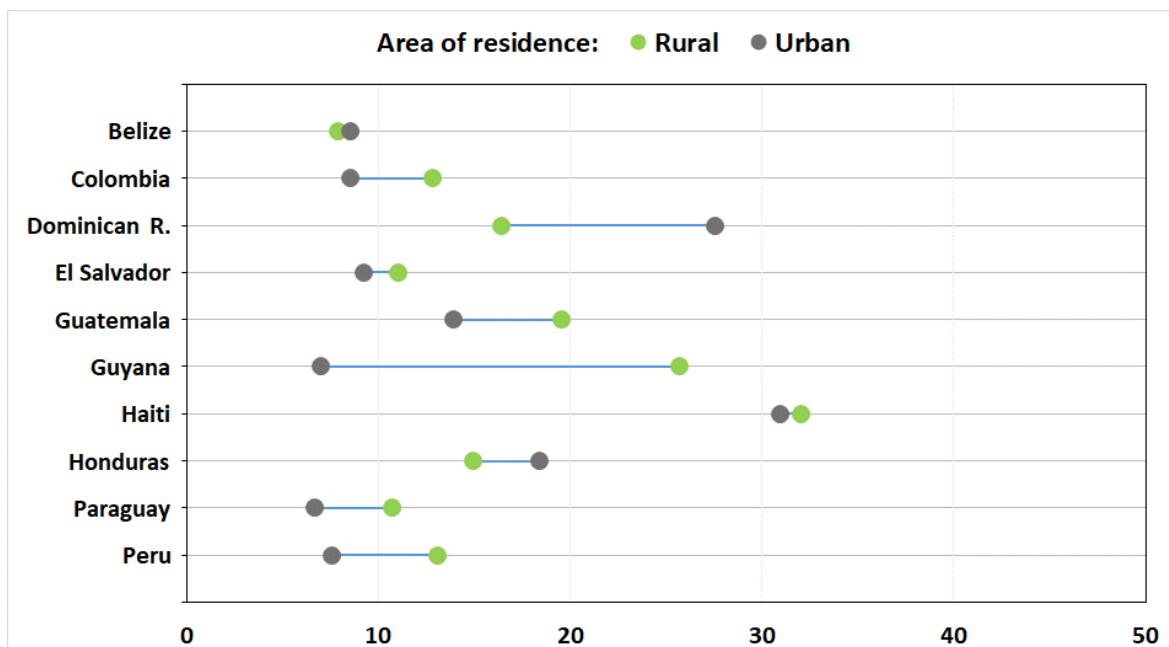
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 59 – Postnatal care for the mother (%)



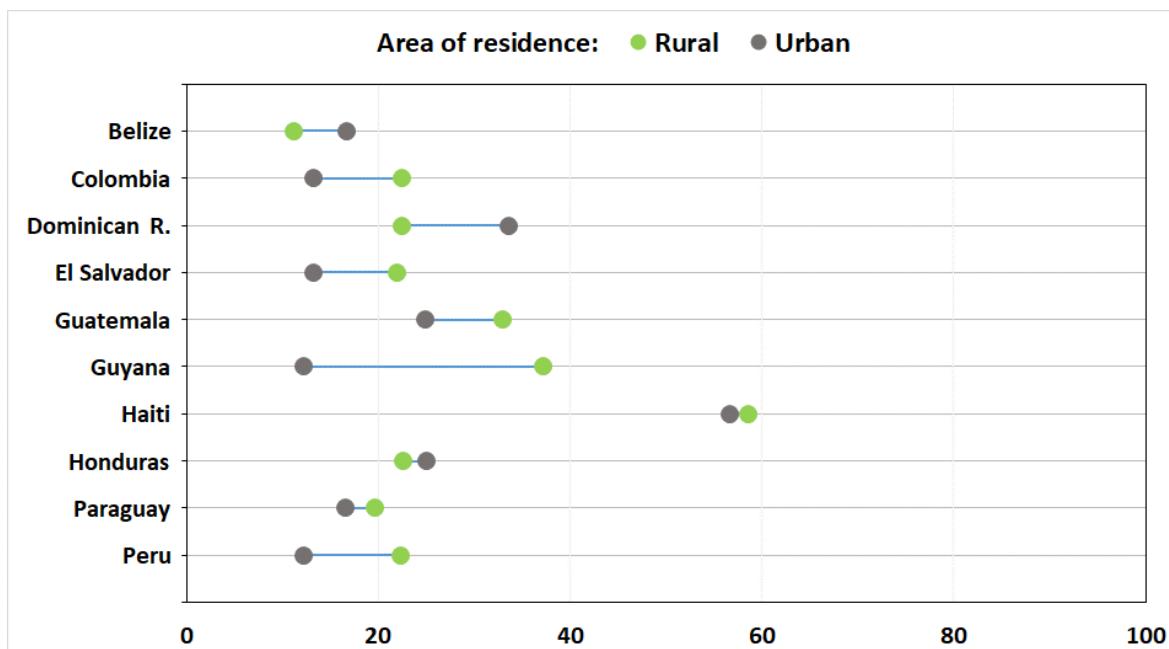
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 60 – Neonatal mortality rate (%)



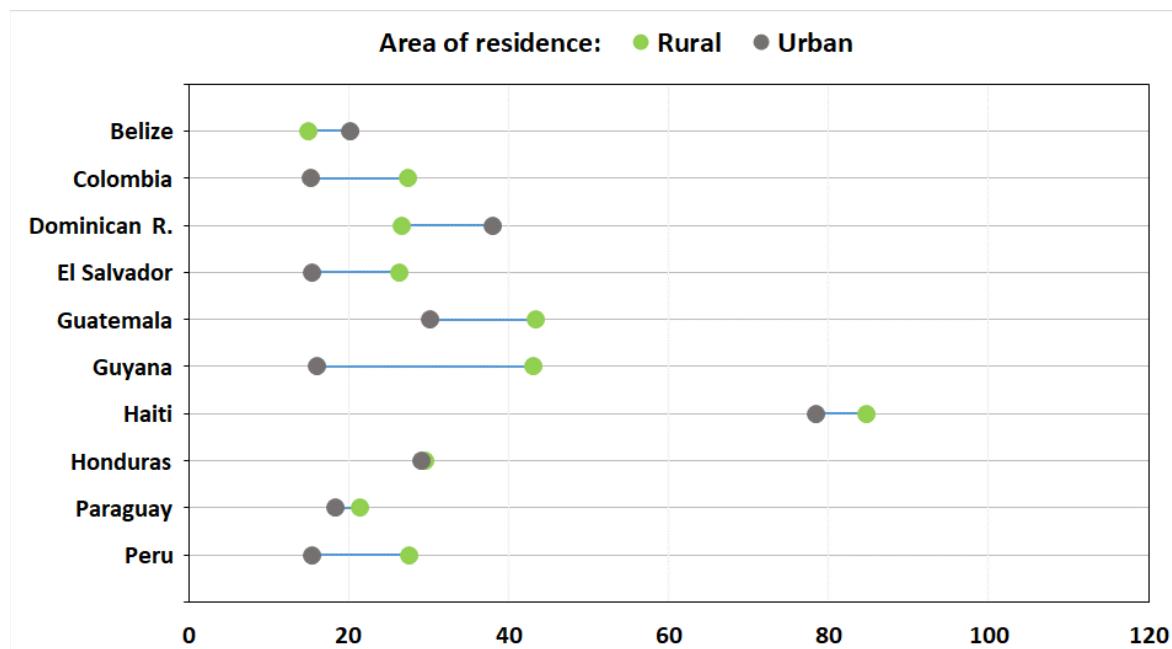
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 61 – Infant mortality rate (%)



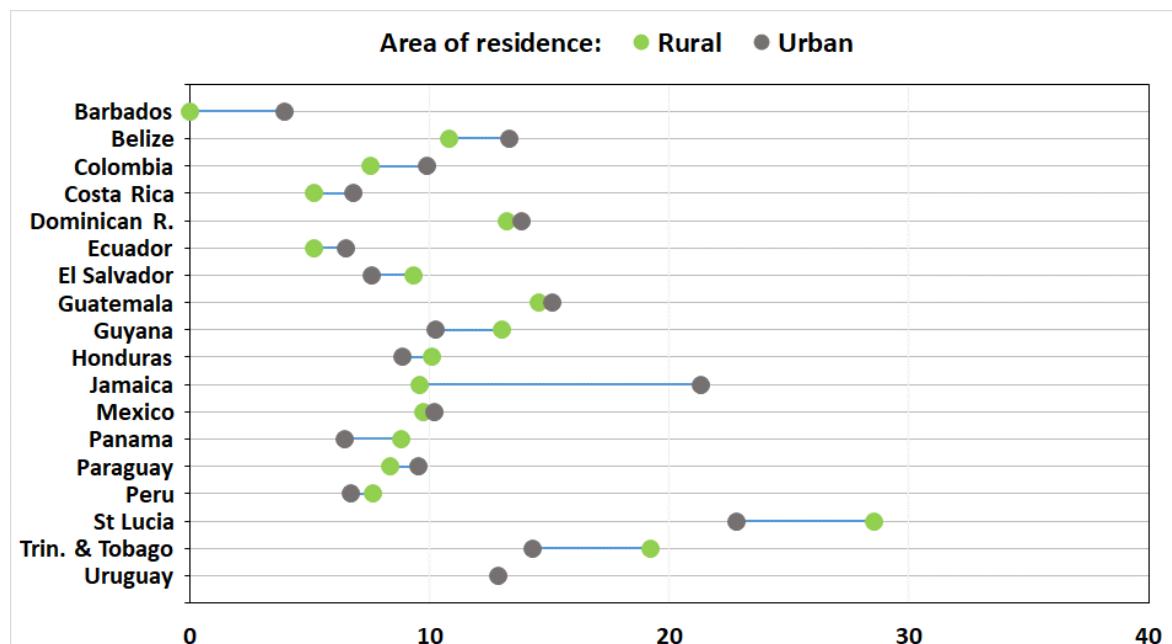
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 62 – Under-five mortality rate (%)



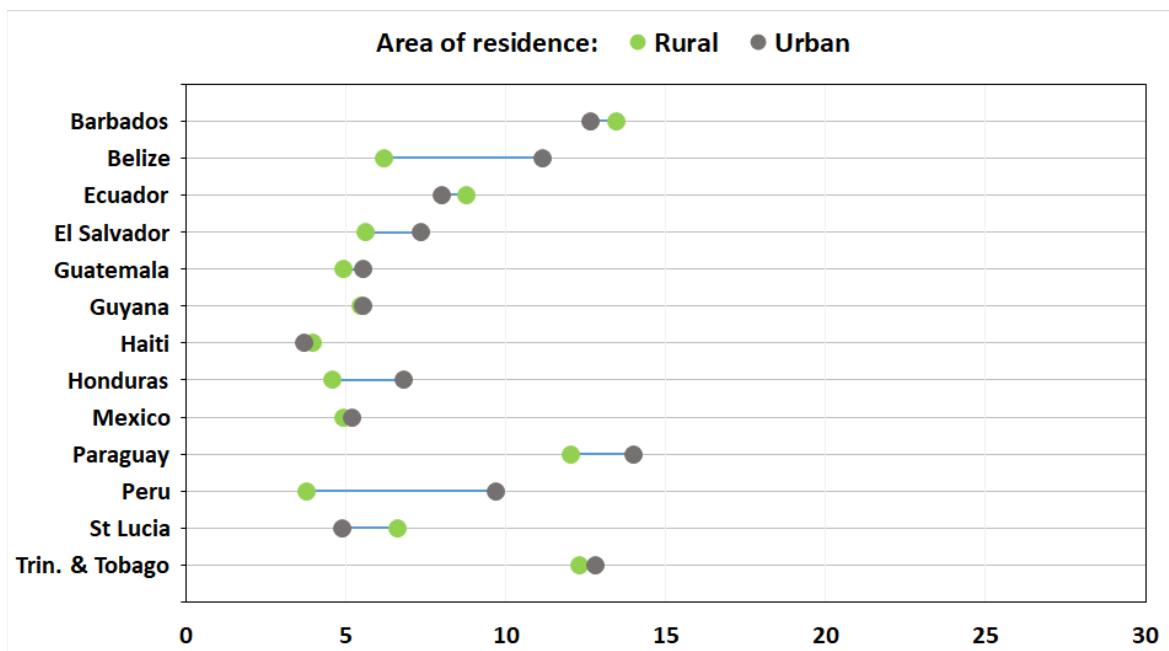
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 63 – Low birth weight (%)



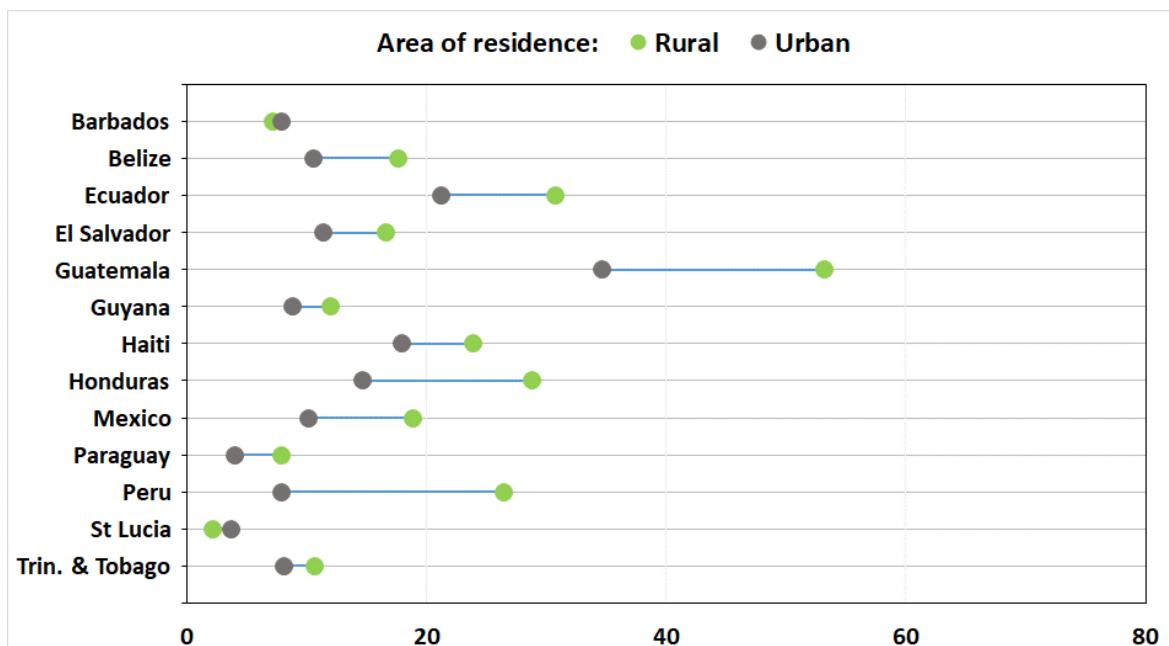
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 64 – Overweight in under-5-children (%)



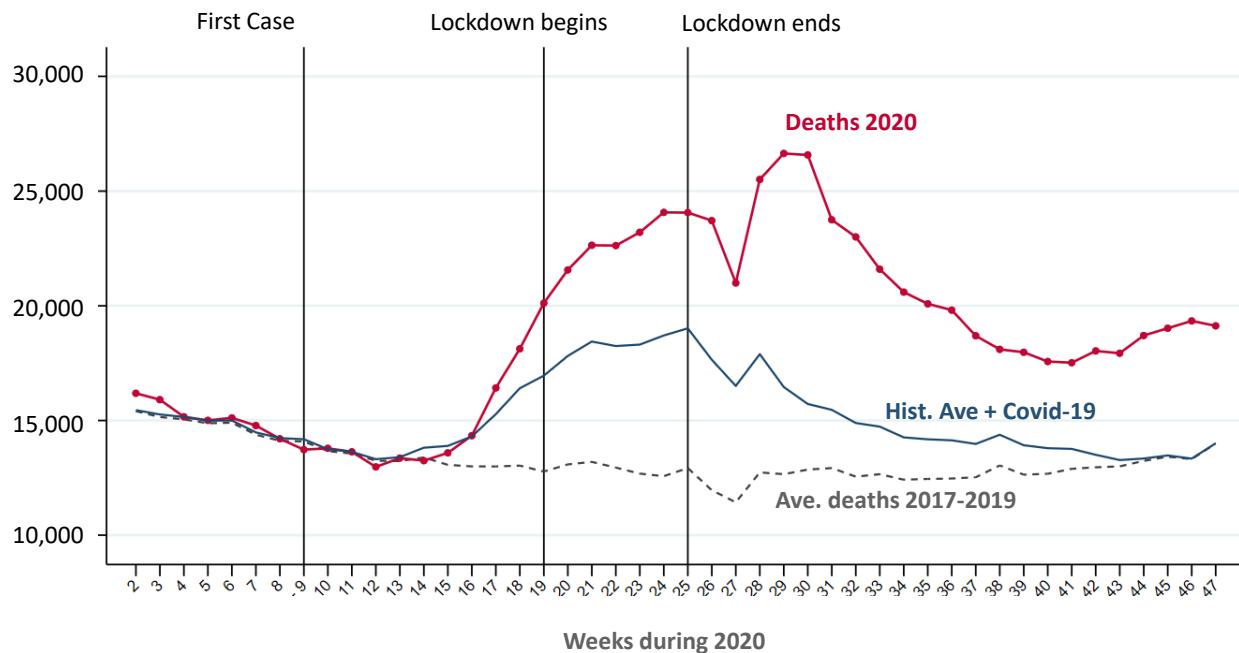
Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

Figure 65 – Stunting in under-5-children (%)



Source: Barros, A., Vidaletti Ruas, L. P., & Victora, C. (2020). Regional Baseline Report on Inequalities in EWEC-LAC Indicators in 21 Countries in the Latin America and Caribbean Region

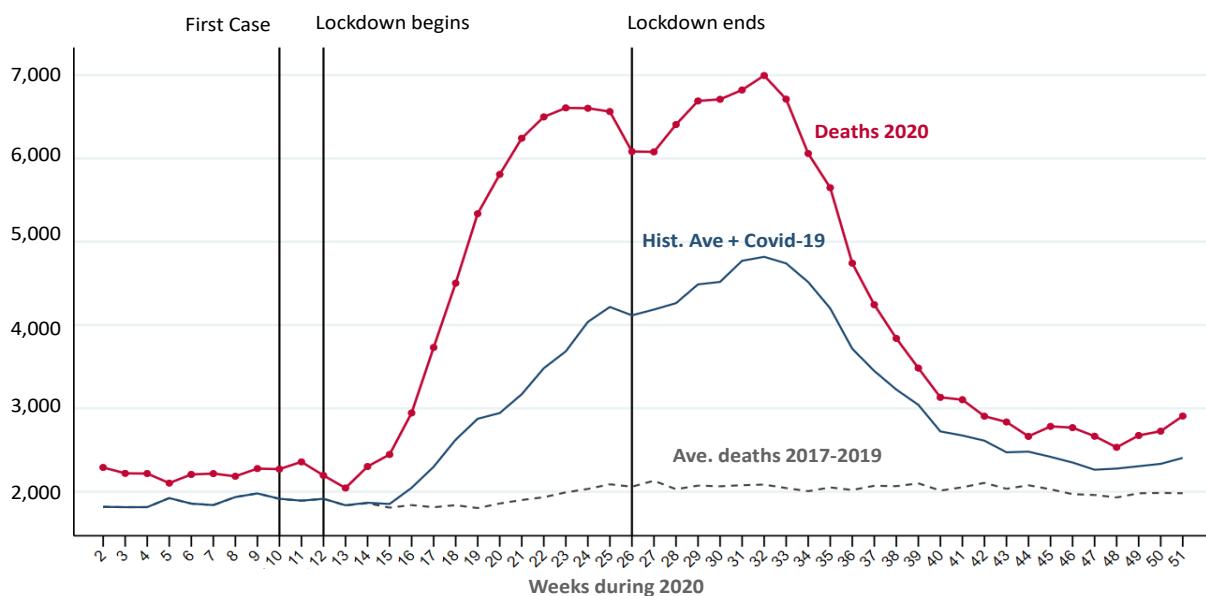
Figure 66 – Reported COVID-19 Mortality and Excess Mortality (Deaths): Mexico



Source: Data from *Secretaría de Salud*, Government of Mexico, as analyzed in Ibanez, et al, forthcoming.

Notes: Last update: January 8, 2021. Week 1 and 48 excluded as they represent partial weeks. Week 48: Nov. 22 to 28, 2020. Non-violent deaths only. Excess deaths = Total deaths – Average deaths.

Figure 67 – Reported COVID-19 Mortality and Excess Mortality (Deaths): Peru



Source: Data from SINADEF and Census as analyzed in Ibanez, et al., forthcoming.

Notes: Last update: January 8, 2021. Week 1 and 52 excluded as they represent partial weeks. Week 52: Dec 27, 2020 to January 2, 2021. Non-violent deaths only. Excess deaths = Total deaths – Average deaths.

ANNEX II. TABLES

Table 1 - Deaths and DALYs by cause in Latin America & the Caribbean, 2019

	DALYs		Deaths	
	(number)	(%)	(number)	(%)
CMNN	26,271,552	14.3%	477,614	11.8%
Enteric infections	2,113,681	1.2%	29,155	0.7%
HIV/AIDS and sexually transmitted infections	2,654,270	1.4%	46,663	1.1%
Maternal and neonatal disorders	9,397,961	5.1%	89,379	2.2%
Neglected tropical diseases and malaria	1,240,322	0.7%	14,964	0.4%
Nutritional deficiencies	2,395,666	1.3%	27,386	0.7%
Other infectious diseases	1,162,033	0.6%	17,204	0.4%
Respiratory infections and tuberculosis	7,307,619	4.0%	252,863	6.2%
NCDs	130,973,145	71.3%	3,138,473	77.3%
Cardiovascular diseases	22,931,414	12.5%	1,099,697	27.1%
Chronic respiratory diseases	5,497,869	3.0%	207,663	5.1%
Diabetes and kidney diseases	14,745,943	8.0%	430,634	10.6%
Digestive diseases	8,911,607	4.9%	261,701	6.4%
Mental disorders	12,376,875	6.7%	14	0.0%
Musculoskeletal disorders	13,321,549	7.3%	12,202	0.3%
Neoplasms	19,286,933	10.5%	762,569	18.8%
Neurological disorders	8,721,913	4.7%	197,035	4.9%
Other non-communicable diseases	12,927,372	7.0%	124,192	3.1%
Sense organ diseases	5,277,812	2.9%		0.0%
Skin and subcutaneous diseases	3,633,481	2.0%	17,416	0.4%
Substance use disorders	3,340,377	1.8%	25,351	0.6%
Injuries	26,405,483	14.4%	444,569	11.0%
Self-harm and interpersonal violence	11,363,305	6.2%	202,002	5.0%
Transport injuries	6,701,679	3.6%	121,506	3.0%
Unintentional injuries	8,340,499	4.5%	121,061	3.0%
Total	183,650,180	100.0%	4,060,656	100.0%

Source: calculations based on IHME, GHDx, accessed November 2020.

Table 2 – Share of deaths by risk factor, 2019

Country	Behavioral					Environmental	Metabolic
	All (%)	Alcohol use (%)	Child and maternal malnutrition (%)	Intimate partner violence (%)	Tobacco (%)	All (%)	All (%)
Argentina	34.8	6.0	1.3	0.06	16.5	11.2	31.7
Bahamas	28.6	5.3	0.9	0.42	6.7	5.6	38.0
Barbados	25.2	4.1	0.8	0.13	5.9	7.7	39.9
Belize	30.4	6.2	3.6	0.39	8.1	10.0	33.3
Bolivia	27.4	4.0	6.4	0.13	5.3	13.6	28.4
Brazil	33.2	5.5	2.5	0.13	13.5	8.8	32.4
Chile	31.6	7.6	1.0	0.05	11.5	11.0	34.3
Colombia	27.8	3.1	2.2	0.07	8.2	11.0	32.7
Costa Rica	27.6	4.5	1.0	0.11	9.7	8.5	35.0
Dominican Republic	38.1	5.3	5.3	0.25	12.7	12.0	39.0
Ecuador	26.4	4.3	3.2	0.19	5.9	9.6	33.4
El Salvador	26.4	5.7	2.0	0.12	5.1	11.6	38.5
Guatemala	27.8	6.2	6.9	0.06	5.0	17.1	28.3
Guyana	34.3	7.1	3.8	0.36	7.8	11.1	43.4
Haiti	34.7	4.2	11.6	0.50	3.9	21.1	28.2
Honduras	30.0	5.3	4.1	0.21	9.3	17.7	33.4
Jamaica	30.0	2.1	2.2	0.27	10.2	9.2	45.0
Mexico	29.6	6.7	2.6	0.10	7.8	12.5	41.6
Nicaragua	31.7	5.8	3.2	0.11	7.1	14.1	43.8
Panama	28.9	4.4	2.8	0.16	6.8	7.9	36.2
Paraguay	35.8	6.2	2.6	0.09	14.5	11.8	38.4
Peru	22.8	4.4	3.3	0.13	3.7	12.8	25.7
Suriname	34.0	4.9	3.4	0.22	12.0	10.5	39.8
Trinidad and Tobago	34.1	3.4	1.3	0.23	10.8	9.0	51.9
Uruguay	33.7	5.0	0.7	0.05	16.0	8.6	30.5
Venezuela	32.9	4.6	2.2	0.12	10.6	12.8	41.6
CAN	27.5	4.1	2.7	0.1	7.1	11.6	33.3
CCB	31.0	4.5	2.1	0.3	8.9	8.8	43.0
CID	30.2	5.3	4.5	0.2	7.4	13.3	35.1
CSC	33.8	6.1	1.6	0.1	14.4	10.3	33.5
East Asia & Pacific	41.3	4.7	1.3	0.03	21.9	21.5	36.1
Europe & Central Asia	40.4	6.2	0.5	0.04	17.4	12.2	41.9
Latin America & Caribbean	31.5	5.5	2.8	0.12	11.0	11.1	34.7
Middle East & North Africa	34.3	0.8	3.6	0.07	14.5	20.3	46.8
South Asia	35.4	3.1	8.0	0.04	12.9	28.3	28.6
Sub-Saharan Africa	38.0	3.4	18.6	0.81	3.7	22.2	15.4

Source: calculations based on IHME, GHDx, accessed November 2020. Shares for IDB regions (CAN, CCB, CID and CSC) correspond to the average share across each region.

Note: Total behavioral risk column includes an additional 7 risks which are not included here.

Table 3.2. Regions

	CAN	CCB	CID	CSC	Sub-Saharan Africa	South Asia	Middle East & North Africa	Latin America & Caribbean	Europe & Central Asia	East Asia & Pacific
Injuries										
Self-harm and interpersonal violence	4	5	4	4	6	9	8	5	4	4
Transport injuries	8	21	21	21	21	21	21	21	21	21
Unintentional injuries	10	11	13	9	12	3	6	10	12	13
CMNN										
HIV/AIDS and sexually transmitted infections	14	18	18	18	19	20	19	19	20	15
Maternal and neonatal disorders	11	15	19	16	16	17	17	18	15	19
Neglected tropical diseases and malaria	13	9	12	11	11	13	11	4	10	11
Nutritional deficiencies	18	16	15	17	18	8	14	14	18	18
Other infectious diseases	17	6	7	6	8	15	10	11	7	9
Respiratory infections and tuberculosis	9	14	16	14	17	5	5	13	14	17
NCD										
Cardiovascular diseases	1	1	1	1	1	1	1	1	1	1
Chronic respiratory diseases	7	17	20	20	20	6	15	16	19	20
Diabetes and kidney diseases	3	3	3	3	3	11	7	3	3	6
Digestive diseases	5	13	11	13	13	4	16	17	13	14
Enteric infections	15	4	5	5	4	2	4	7	5	7
Mental disorders	21	10	9	10	10	12	9	9	11	8
Musculoskeletal disorders	16	20	14	19	14	19	20	20	17	16
Neoplasms	2	8	10	7	5	14	2	6	6	5
Neurological disorders	6	2	2	2	2	7	3	2	2	2
Other non-communicable diseases	12	7	6	8	7	16	12	8	8	3
Skin and subcutaneous diseases	20	19	17	15	15	18	18	15	16	12
Substance use disorders	19	12	8	12	9	10	13	12	9	10

Source: calculations based on IHME, GHDx, accessed November 2020.

Table 4.2. Regions

	CAN	CCB	CID	CSC	Sub-Saharan Africa	South Asia	Middle East & North Africa	Latin America & Caribbean	Europe & Central Asia	East Asia & Pacific
Injuries										
Self-harm and interpersonal violence	12	11	10	10	12	12	12	9	8	13
Transport injuries	21	21	22	22	3	20	21	21	22	22
Unintentional injuries	7	5	7	4	11	9	3	6	4	6
MNCH										
HIV/AIDS and sexually transmitted infections	20	18	20	19	10	13	18	19	18	19
Maternal and neonatal disorders	8	8	5	14	1	2	7	8	17	14
Neglected tropical diseases and malaria	10	9	9	8	13	10	10	11	7	9
Nutritional deficiencies	14	15	16	15	20	17	15	15	12	10
Other infectious diseases	11	13	13	13	14	14	6	13	15	12
Respiratory infections and tuberculosis	9	10	12	7	16	15	9	10	6	8
NCDs										
Cardiovascular diseases	1	1	1	2	7	1	1	1	1	1
Chronic respiratory diseases	5	4	4	5	6	5	2	5	5	5
Diabetes and kidney diseases	15	16	14	11	19	6	14	14	10	4
Digestive diseases	22	22	21	21	8	18	20	22	21	21
Enteric infections	18	19	19	17	22	21	19	17	14	17
Mental disorders	17	12	15	18	5	22	22	18	19	20
Musculoskeletal disorders	4	6	8	3	18	8	5	4	3	3
Neoplasms	3	3	2	6	15	11	8	3	9	7
Neurological disorders	2	2	3	1	9	4	4	2	2	2
Other non-communicable diseases	19	20	17	20	4	7	16	20	20	18
Skin and subcutaneous diseases	6	7	6	9	17	16	11	7	11	16
Substance use disorders	16	17	18	16	21	19	17	16	16	15

Source: calculations based on IHME, GHDx, accessed November 2020.

Table 5 – Share of DALYs by risk factor, 2019

Country	Behavioral					Environmental	Metabolic
	All (%)	Alcohol use (%)	Child and maternal malnutrition (%)	Intimate partner violence (%)	Tobacco (%)	All (%)	All (%)
Argentina	28.2	5.8	3.3	0.2	11.6	8.2	19.5
Bahamas	24.8	5.2	3.1	0.7	4.6	4.8	24.5
Barbados	22.3	4.2	2.7	0.4	4.6	6.9	28.7
Belize	26.0	5.4	7.5	0.6	4.5	7.7	18.8
Bolivia	25.8	3.3	12.4	0.3	2.9	10.3	14.8
Brazil	27.0	5.7	5.6	0.3	7.9	6.9	18.6
Chile	25.4	6.9	2.0	0.4	8.5	7.3	20.0
Colombia	21.4	3.9	4.6	0.2	4.8	7.5	17.8
Costa Rica	21.2	4.6	3.0	0.4	5.7	6.3	21.0
Dominican Republic	31.6	4.7	10.8	0.5	7.0	9.4	21.6
Ecuador	21.4	3.9	5.9	0.4	3.3	7.3	18.1
El Salvador	22.2	6.7	4.0	0.3	3.2	8.3	22.2
Guatemala	25.3	6.2	10.6	0.2	2.7	13.2	15.6
Guyana	31.3	6.4	8.3	0.6	5.4	8.5	27.1
Haiti	33.2	3.1	18.7	0.6	2.2	17.3	14.3
Honduras	24.5	4.5	8.3	0.3	5.0	13.0	18.6
Jamaica	26.4	2.4	6.3	0.5	7.0	7.6	27.3
Mexico	23.3	6.0	4.7	0.3	4.5	8.6	25.3
Nicaragua	25.0	5.3	6.3	0.3	4.0	10.3	23.5
Panama	23.2	4.1	6.0	0.3	3.6	6.4	19.5
Paraguay	26.3	5.8	5.3	0.2	7.4	8.7	19.8
Peru	19.5	3.7	6.5	0.3	2.0	8.8	13.3
Suriname	30.1	4.4	7.9	0.5	8.2	8.3	25.4
Trinidad and Tobago	28.6	3.7	3.8	0.5	8.0	7.3	34.5
Uruguay	28.0	5.0	2.2	0.2	12.7	6.7	19.3
Venezuela	25.8	4.7	5.0	0.3	6.6	10.5	24.1
CAN	22.0	4.0	5.5	0.3	4.2	8.5	18.3
CCB	27.2	4.4	5.3	0.5	6.3	7.2	27.9
CID	25.6	4.9	8.4	0.4	4.1	10.1	19.6
CSC	27.0	5.8	3.7	0.2	9.6	7.6	19.4
East Asia & Pacific	31.3	4.3	3.6	0.2	14.5	15.6	23.6
Europe & Central Asia	33.2	7.0	2.0	0.2	14.2	8.8	26.5
Latin America & Caribbean	25.6	5.3	5.8	0.3	6.5	8.4	20.1
Middle East & North Africa	25.9	0.7	7.7	0.4	8.7	13.6	24.7
South Asia	33.1	2.6	16.8	0.2	7.0	19.6	16.0
Sub-Saharan Africa	38.1	2.1	26.0	0.8	1.9	20.1	6.7

Source: calculations based on IHME, GHDx, accessed November 2020. Shares for IDB regions (CAN, CCB, CID and CSC) correspond to the average share across each region.

Note: Total behavioral risk column includes an additional 7 risks which are not included here.

Table 6.2. Regions

	CAN	CCB	CID	CSC	Sub-Saharan Africa	South Asia	Middle East & North Africa	Latin America & Caribbean	Europe & Central Asia	East Asia & Pacific
Behavioral risks										
Alcohol use	9	10	9	7	10	11	15	9	7	9
Child and maternal malnutrition	10	12	10	12	1	6	11	10	17	14
Childhood maltreatment	20	20	20	20	20	20	20	20	19	20
Dietary risks	3	4	5	5	7	4	4	4	2	3
Drug use	18	19	18	18	17	18	17	18	14	16
Intimate partner violence	19	18	19	19	15	19	19	19	20	19
Low physical activity	15	9	15	10	18	15	10	12	11	13
Tobacco	6	5	7	2	9	3	5	5	3	2
Unsafe sex	11	11	12	14	5	17	18	13	16	15
Environmental risks										
Air pollution	8	8	6	9	2	1	7	8	9	4
Occupational risks	13	14	14	13	14	14	13	14	12	11
Other environmental risks	14	13	13	15	16	13	12	15	13	12
Unsafe water	16	15	16	17	3	9	14	16	18	18
Metabolic risks										
High body-mass index	4	3	3	4	8	8	2	3	4	7
High fasting plasma glucose	2	1	1	3	6	5	3	2	5	5
High LDL cholesterol	7	7	8	6	12	7	6	7	6	6
High systolic blood pressure	1	2	2	1	4	2	1	1	1	1
Low bone mineral density	17	16	17	16	19	16	16	17	15	17

Source: calculations based on IHME, GHDx, accessed November 2020.

Table 7.2. Regions

	CAN	CCB	CID	CSC	Sub-Saharan Africa	South Asia	Middle East & North Africa	Latin America & Caribbean	Europe & Central Asia	East Asia & Pacific
Behavioral risks										
Alcohol use	8	10	7	6	8	11	16	7	7	8
Child and maternal malnutrition	5	6	4	7	1	1	7	6	12	11
Childhood maltreatment	19	19	19	19	18	19	18	19	18	20
Dietary risks	4	4	6	5	9	5	5	5	3	3
Drug use	15	16	16	14	16	15	15	15	13	13
Intimate partner violence	20	17	20	20	15	20	19	20	20	19
Low physical activity	18	12	17	13	20	18	12	14	14	18
Tobacco	6	5	9	2	10	4	4	4	1	1
Unsafe sex	12	11	12	12	4	17	20	12	16	15
Environmental risks										
Air pollution	9	8	8	10	3	2	6	9	8	4
Occupational risks	11	13	11	11	11	12	11	11	10	9
Other environmental risks	16	15	15	18	17	14	14	17	17	14
Unsafe water	13	14	13	16	2	8	13	13	19	17
Metabolic risks										
High body-mass index	1	2	2	1	7	7	2	1	4	6
High fasting plasma glucose	2	1	1	4	6	6	3	2	5	5
High LDL cholesterol	10	9	10	8	13	9	8	10	6	7
High systolic blood pressure	3	3	3	3	5	3	1	3	2	2
Low bone mineral density	17	18	18	17	19	16	17	18	15	16

Source: calculations based on IHME, GHDx, accessed November 2020.

Table 8 - Comparison of health system capacity and health outcomes, Latin America & the Caribbean

	Medical doctors (per 10,000 population)	Medical doctors Female Share (%)	Nursing personnel Female Share (%)	Hospital beds (per 10,000 population)	Coverage of antenatal care (4 visits)
Argentina	39.9	n.a.	19.5	50.0	94.6
Bahamas	20.1	n.a.	n.a.	29.0	n.a.
Barbados	24.8	n.a.	88.2	58.0	98.7
Belize	11.2	n.a.	94.8	13.0	90.1
Bolivia	15.9	n.a.	86.6	11.0	n.a.
Brazil	21.6	42.8	86.5	22.0	n.a.
Chile	25.9	41.8	85.1	22.0	n.a.
Colombia	21.8	n.a.	n.a.	15.0	89.7
Costa Rica	28.9	48.1	82.5	11.6	90.3
Dominican Republic	15.3	n.a.	95.5	16.0	96.7
Ecuador	20.4	49.5	83.7	15.0	n.a.
El Salvador	15.7	49.4	90.9	13.0	n.a.
Guatemala	3.5	n.a.	n.a.	6.0	n.a.
Guyana	8.0	n.a.	96.6	16.0	n.a.
Haiti	2.3	n.a.	n.a.	7.0	67.7
Honduras	3.1	50.5	96.7	7.0	88.8
Jamaica	13.1	n.a.	97.9	17.0	92.7
Mexico	23.8	43.9	85.5	15.2	n.a.
Nicaragua	9.8	53.4	97.1	9.0	n.a.
Panama	15.7	43.5	90.5	23.0	n.a.
Paraguay	13.5	n.a.	82.8	13.0	n.a.
Peru	13.0	n.a.	82.3	16.0	94.4
Suriname	12.1	n.a.	81.7	31.0	84.6
Trinidad and Tobago	41.7	n.a.	n.a.	30.0	n.a.
Uruguay	50.8	57.5	n.a.	28.0	n.a.
Venezuela	n.a.	n.a.	87.2	8.0	n.a.
Averages					
LAC	18.9	48.0	85.6	19.3	89.8
CAN	21.8	49.5	84.4	12.5	94.4
CCB	20.6	n.a.	91.1	34.7	98.7
CID	11.2	43.9	91.0	13.4	96.7
CSC	20.4	41.8	83.9	33.3	94.6

Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Table 6 presents the earliest calculation between 2010 and 2018. Indicators are not available for the same years for all countries across Latin American and the Caribbean.

	Neonatal mortality rate (deaths per 1,000 live births)	Life expectancy at birth (years)	Life expectancy at birth (years)	Life expectancy at birth (years)
Country/Region		Male	Female	Both sexes
Argentina	6.2	73.5	80.3	76.9
Bahamas	6.9	72.6	78.6	75.7
Barbados	8.6	73.1	78.0	75.6
Belize	8.6	67.9	73.4	70.5
Bolivia	15.2	69.1	74.0	71.5
Brazil	8.1	71.4	78.9	75.1
Chile	4.7	76.5	82.4	79.5
Colombia	7.7	71.5	78.8	75.1
Costa Rica	6.2	77.0	82.2	79.6
Dominican Republic	20.0	70.6	76.7	73.5
Ecuador	7.3	74.1	78.9	76.5
El Salvador	6.8	69.0	78.1	73.7
Guatemala	12.6	70.4	76.0	73.2
Guyana	19.1	63.6	69.0	66.2
Haiti	25.8	61.3	65.7	63.5
Honduras	9.5	72.9	77.5	75.2
Jamaica	10.2	73.6	78.5	76.0
Mexico	8.7	74.0	79.2	76.6
Nicaragua	10.6	72.5	78.4	75.5
Panama	8.9	75.0	81.2	78.0
Paraguay	11.2	72.4	76.1	74.2
Peru	6.6	73.4	78.3	75.9
Suriname	11.6	68.7	75.1	71.8
Trinidad and Tobago	11.9	68.2	75.6	71.8
Uruguay	4.4	73.2	80.8	77.1
Venezuela	14.6	69.5	79.0	74.1
Averages				
LAC	10.5	71.3	77.3	74.3
CAN	10.3	71.5	77.8	74.6
CCB	11.4	70.0	75.8	72.9
CID	11.8	71.0	76.8	73.9
CSC	6.9	73.4	79.7	76.6

Source: calculations based on WHO Global Health Observatory (GHO) indicators, accessed June 2020. Table 6 presents the earliest calculation between 2010 and 2018. Indicators are not available for the same years for all countries across Latin America and the Caribbean.

Table 9 – Health expenditures in Latin America & the Caribbean, 2018

Country/Region	Total		Government		Out-of-pocket		Private	
	per capita (US\$)	% GDP						
Argentina	1,128	9.62	696	5.94	313	2.67	119	1.02
Bahamas	2,013	6.25	801	2.49	547	1.70	665	2.06
Barbados	1,165	6.56	532	3.00	542	3.05	91	0.51
Belize	286	5.69	197	3.92	66	1.32	22	0.45
Bolivia	224	6.30	162	4.57	52	1.46	10	0.27
Brazil	848	9.51	354	3.97	234	2.62	260	2.92
Chile	1,456	9.14	878	5.51	484	3.04	94	0.59
Colombia	513	7.64	396	5.90	78	1.16	39	0.58
Costa Rica	910	7.56	672	5.58	204	1.70	34	0.28
Dominican Republic	462	5.73	205	2.54	207	2.57	50	0.63
Ecuador	516	8.14	270	4.26	206	3.24	40	0.64
El Salvador	289	7.11	189	4.65	83	2.05	17	0.42
Guatemala	260	5.71	91	2.00	149	3.28	19	0.43
Guyana	296	5.94	184	3.70	95	1.92	16	0.32
Haiti	64	7.69	9	1.02	28	3.35	28	3.32
Honduras	176	7.05	75	2.99	90	3.61	11	0.45
Jamaica	321	6.06	211	3.99	55	1.03	55	1.04
Mexico	520	5.37	259	2.68	219	2.26	42	0.43
Nicaragua	174	8.56	111	5.45	57	2.82	6	0.30
Panama	1,132	7.27	730	4.69	325	2.09	77	0.49
Paraguay	400	6.65	175	2.92	181	3.02	43	0.72
Peru	369	5.24	233	3.30	108	1.53	29	0.41
Suriname	474	7.97	354	5.95	94	1.58	26	0.43
Trinidad and Tobago	1,123	6.93	552	3.41	493	3.04	78	0.48
Uruguay	1,590	9.20	1,148	6.64	270	1.56	173	1.00
Venezuela	257	3.56	123	1.70	98	1.36	36	0.50
CAN	376	6.18	237	3.95	108	1.75	31	0.48
CID	899	6.62	439	3.76	304	2.06	155	0.81
CCB	427	6.78	254	3.55	143	2.50	31	0.72
CSC	1,084	8.83	650	5.00	296	2.58	138	1.25

Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021. Values for IDB regions are simple unweighted averages of country values. Per capita figures are presented in constant 2018 US dollars.

Table 10 - Health expenditures and Total Government Expenditures in Latin America & the Caribbean, 2018

Country/Region	<i>Total Health Expenditure</i>		<i>Government Health Expenditures</i>		<i>as share of total government expenditures</i>	
	<i>per capita (US\$)</i>	<i>as share of GDP (%)</i>	<i>per capita (US\$)</i>	<i>as share of GDP (%)</i>	<i>2018 (%)</i>	<i>2000 (%)</i>
Argentina	1,128	9.6	696	5.9	16.2	17.8
Bahamas	2,013	6.3	801	2.5	13.6	12.8
Barbados	1,165	6.6	532	3.0	9.4	12.1
Belize	286	5.7	197	3.9	11.2	5.9
Bolivia	224	6.3	162	4.6	11.8	9.0
Brazil	848	9.5	354	4.0	10.3	10.1
Chile	1,456	9.1	878	5.5	21.5	16.3
Colombia	513	7.6	396	5.9	20.9	15.3
Costa Rica	910	7.6	672	5.6	27.4	25.7
Dominican Republic	462	5.7	205	2.5	15.6	11.3
Ecuador	516	8.1	270	4.3	12.1	4.3
El Salvador	289	7.1	189	4.7	19.8	18.8
Guatemala	260	5.7	91	2.0	16.6	14.2
Guyana	296	5.9	184	3.7	10.8	7.8
Haiti	64	7.7	9	1.0	6.1	13.9
Honduras	176	7.1	75	3.0	11.2	14.4
Jamaica	321	6.1	211	4.0	14.2	11.9
Mexico	520	5.4	259	2.7	11.1	9.9
Nicaragua	174	8.6	111	5.5	19.2	12.7
Panama	1,132	7.3	730	4.7	20.2	19.9
Paraguay	400	6.7	175	2.9	15.6	11.7
Peru	369	5.2	233	3.3	15.0	10.9
Suriname	474	8.0	354	6.0	12.9	12.5
Trinidad and Tobago	1,123	6.9	552	3.4	11.2	6.8
Uruguay	1,590	9.2	1,148	6.6	20.3	14.3
Venezuela	257	3.6	123	1.7	7.6	11.9
<hr/>						
LAC	653	7.0	369.5	4.0	14.7	12.8
CAN	376	6.2	237	4.0	13.5	10.3
CID	899	6.6	439	3.8	12.0	10.7
CCB	427	6.8	254	3.6	15.8	14.7
CSC	1,084	8.8	650	5.0	16.8	14.0

Source: calculations based on WHO Global health Expenditure Database (GHED), accessed January 2021. Values for IDB regions are simple unweighted averages of country values. Per capita figures are presented in constant 2018 US dollars.

Table 11.2 Regions

	Healthcare Access and Quality Index															
	Conditions															
	Adverse effects of medical treatment															
	Appendicitis	Breast cancer	Cerebrovascular disease	Cervical cancer	Chronic kidney disease	Chronic respiratory diseases	Colon and rectum cancer	Congenital heart anomalies	Diabetes mellitus	Diarrheal diseases	Diphtheria	Epilepsy	Gallbladder and biliary diseases	Healthcare Access and Quality Index	Hodgkin lymphoma	
Latin American and Caribbean	55.6	55	63	50	53	27	58.2	69	38.7	51	52	100	69	47.5	62	30
Sub-Saharan Africa	30.6	34	27	40	25	50	47.5	21	57.1	47	21	100	37	37.7	32	9.4
South Asia	25.4	31	40	30	44	31	58.1	34	42.5	56	34	100	40	58.5	40	17
Southeast Asia	52.3	50	50	31	51	32	51	43	39.5	43	47	100	62	48.4	48	23
Central Europe, Eastern Europe, and Central Asia	58.8	89	67	38	60	67	98.3	62	48.9	73	65	100	65	79	71	59
North Africa and Middle East	48.8	73	54	40	45	32	55.1	48	26.6	54	42	100	61	60.8	56	25
High-income North America	71.7	100	100	79	85	56	76.9	93	71.8	63	83	100	100	95	89	100
China	97.4	100	80	31	62	58	95.4	79	35.7	85	79	100	80	80.5	78	43

Source: GBD 2015 Healthcare Access and Quality Collaborators. "Healthcare Access and Quality Index." The Lancet. 2017.

Note: The health care access quality index ranges from zero to 100. It indicates the share of cases amenable to treatment that are successfully treated relative to the world's best-performing country for that condition.

	Hypertensive heart disease	Inguinal, femoral, and abdominal hernia	Ischemic heart disease	Leukemia	Lower respiratory infections	Maternal disorders	Measles	Neonatal disorders	Non-melanoma skin cancer (squamous-cell carcinoma)	Peptic ulcer disease	Rheumatic heart disease	Testicular cancer	Tetanus	Tuberculosis	Upper respiratory infections	Uterine cancer
Latin American and Caribbean	51	58.8	58	26	42	61	100	42	54.7	63	79	52	100	66	100	67
Sub-Saharan Africa	34	37.2	64	16	23	19	40	19	26.7	38	52	12	50	21	100	16
South Asia	40	43.4	31	22	44	43	55	21	12.8	44	26	24	68	31	100	29
Southeast Asia	37	57.1	54	25	45	47	59	36	8.3	38	56	35	72	35	100	41
Central Europe, Eastern Europe, and Central Asia	42	83.2	31	56	48	87	97	52	43.9	58	61	62	100	55	100	75
North Africa and Middle East	45	96.9	32	21	52	51	79	36	30.9	68	68	45	89	52	100	44
High-income North America	58	99.4	67	81	60	83	100	67	90	96	81	96	100	100	100	98
China	47	100	73	63	82	96	100	53	21.3	73	54	63	100	70	100	66

Source: GBD 2015 Healthcare Access and Quality Collaborators. "Healthcare Access and Quality Index." The Lancet. 2017.

Note: The health care access quality index ranges from zero to 100. It indicates the share of cases amenable to treatment that are successfully treated relative to the world's best-performing country for that condition.

Table 12 - Summary of Main Benefits of Select Digital Health Interventions

Digital Health Intervention Type	Structures	Processes	Outcomes	Return on investment / Business Case
Electronic Health Record Systems	<ul style="list-style-type: none"> · Completeness and quality of information systems · More accurate information that is updated frequently and accessed quickly · Improvements in research quality and timely access to higher-quality information · Better public health surveillance and management 	<ul style="list-style-type: none"> · Quality of patient care is enhanced—EHR systems are positively associated with adherence to clinical guidelines, lower medical errors, and lower adverse drug effects · Better follow-up on test results and coordination among different levels of care and within teams of health care professionals · Cost of redundant diagnostics is reduced · Time spent copying data from patients is reduced 	<ul style="list-style-type: none"> · No effects on mortality or length of stay in hospital settings · CDSSs linked to EHRs show reduced relative risk of morbidity in the order of 10 percent–18 percent 	<ul style="list-style-type: none"> · Mixed results depending on context, but examples of positive rates of return and short recovery times in advanced implementations
Telehealth	<ul style="list-style-type: none"> · Telemedicine can allow for specialists to provide quality care in hard to reach areas without trained personnel by supporting provider-to-provider tele-consult or directly to patients 	<ul style="list-style-type: none"> · shortened diagnosis time, faster and better patient management, improving accuracy of triage, increased confidence, and reduced amount of unnecessary procedures 		
Mobile health	<ul style="list-style-type: none"> improve access to nominal information of the population 	<ul style="list-style-type: none"> · support task shifting and improve quality by providing decision support at point-of-care and adapting procedures designed for clinical workers to cadres with limited training, such as community health workers to improve patient adherence to medication, improve compliance of health promoters with treatment guidelines 		<ul style="list-style-type: none"> Provide a cost-effective approach to improve communication between promoters and their supervisors
Digital interventions for public health emergencies*	<ul style="list-style-type: none"> · Mobile health and geospatial mapping technologies were found to reduce the need for paper registries and manual data entry · Mobile Health has been widely used to overcome difficulties in management and communication in times of public health emergencies · Crowd sourcing technologies have been used to gather real-time information and map outbreaks · improvement in GIS allowed it to link disease information with environmental and spatial data, which makes it an asset in the progression of worldwide healthcare 	<ul style="list-style-type: none"> Mobile Health has been shown to improve knowledge of front-line workers during public health emergencies 		

Source: Adapted from Nelson, J., Cafagna, G., & Tejerina, L. (2020). Electronic Health Record Systems: Definitions, Evidence, and Practical Recommendations for Latin America and the Caribbean. Electronic Health Record Systems: Definitions, Evidence, and Practical Recommendations for Latin America and the Caribbean. Inter-American Development Bank. <https://doi.org/10.18235/0002240>.

Table 13 – Conceptual framework of reference

Category	Sources
Specificities of the ECA	
Law on HER	Borbolla et al (2019), RACSEL (2019), HPEU (2014)
Type of information in the EHR	Borbolla et al (2019), RACSEL (2019), HPEU (2014)
Minimum data to be included in the EHR	Borbolla et al (2019), RACSEL (2019)
Regulation of the transition between paper to electronic health records	RACSEL (2019), WHO (2016), HPEU (2014)
Protecting patient data and secondary use of information	
Personal data protection	Borbolla et al (2019), RACSEL (2019), WHO (2016)
Exchange of information at the national level	Borbolla et al (2019), RACSEL (2019), WHO (2016)
Security in storage of patient data	Borbolla et al (2019), RACSEL (2019), HPEU (2014)
Secondary use of health information	Borbolla et al (2019), WHO (2016), HPEU (2014)
Action of health professionals	
Digital signatures of health professionals and electronic documents	Borbolla et al (2019), RACSEL (2019)
Access restrictions	Borbolla et al (2019), RACSEL (2019)
Emergency access	Borbolla et al (2019), RACSEL (2019)
Patient role in relation to EHR	
Consent to the use of personal health data	Borbolla et al (2019), RACSEL (2019), HPEU (2014)
Patient identification	Borbolla et al (2019), RACSEL (2019)
Patients' access to their personal health data	Borbolla et al (2019), RACSEL (2019), WHO (2016), HPEU (2014)
Patients and their right to edit their personal health data	Borbolla et al (2019), WHO (2016), HPEU (2014)
EHR Health and Interoperability Standards	
Interoperability and standards	Borbolla et al (2019), RACSEL (2019), HPEU (2014)
National health codifications	Borbolla et al (2019), RACSEL (2019), HPEU (2014)

Source: RACSEL, 2019, Marco institucional y normativo para implementar salud electrónica, recomendaciones técnicas. Borbolla D, Becerra-Posada F, Novillo-Ortiz D., 2019, Marco legal para registros médicos electrónicos en la Región de las Américas: definición de dominios a legislar y análisis de situación. Rev Panam Salud Pública. 2019;43:e25. <https://doi.org/10.26633/RPSP.2019.25>. WHO, 2016, Atlas of eHealth country profiles: the use of eHealth in support of universal health coverage: based on the findings of the third global survey on eHealth 2015. HPEU, 2014, Overview of the national laws on electronic health records in the EU Member States and their interaction with the provision of cross-border eHealth services Final report and recommendations.

Table 14 – Digital health facilities indicators in Brazil, El Salvador, and Uruguay

Indicators	Brazil			El Salvador			Uruguay		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
Used computers in the last 12 months	95	91	99	52.6*					
Access to internet, by type of connection									
Total - fixed broadband	97	94	100						
Connection via cable or optical fiber	84	75	92		0.2		34.8	25.1	47.7
Connection via telephone line (DSL)	49	30	65		16.8		54.3	46.3	65.1
Mobile connection via modem or 3G or 4G chip	38	21	52		0.2		16.8	12.8	22.2
Connection via radio	14	23	7						
Satellite connection	12	11	13		2.3		9.1	9.7	8.4
Dial-up connection	3	3	4						
Department or information technology area	25	13	35	16.3			12.0	10.4	14.3
Existence of electronic system for registration of patient information	73	66	80						
Type of maintenance of clinical and registration information in patients' records									
Only in electronic format	18	10	25		1.6		70.8	64.8	78.8
Only on paper	27	38	17		61.4		22.0	28.2	13.7
Part in paper and part in electronic format	54	51	56						
Type of data on the patient available electronically									
Patient registration data	79	74	84		47.9		68.7	54.7	87.7
Clinical history or notes on patient care	61	55	67		6.2				
Diagnosis, problems or health conditions of the patient	60	56	64		24.9		49.8	41.4	61.1
Results of laboratory tests of the patient	53	54	52		13.7		60.9	52.3	72.4
Electronic functionalities available in system									
Schedule appointments, exams or surgeries	54	53	56		34.5				
Generate orders for materials and supplies	44	50	39		28.7				
Request laboratory tests	41	51	33		3.9				
List all laboratory test results for a specific patient	38	38	39		14.5				
Perform medical prescription	37	43	33		8.0		24.3	13.3	39.1
List all patients by type of diagnosis	36	38	35		31.8				
Decision support features available in system									
Clinical guidelines or best practices or protocols	31	27	35		4.1				
Drug allergy alerts and reminders	21	16	25		1.5				
Available tele-health services									
Distance education in health	24	37	12						
Teleconsulting services	20	29	11		2.0		5.0	10.8	
Distance research activities	18	29	8		5.5				
Tele diagnostic services	12	22	4						
Second opinion training services	11	17	5						
Remote patient monitoring	8	7	9						

Source: For Brazil, Portal de Dados produced by *Centro Regional de Estudos para o Desenvolvimento da Sociedade da Informação* (CETIC.br), 2018, for El Salvador, the Survey of Public Health Establishments, 2020 using CETIC.BR Survey Methodology, and for Uruguay the National Survey of Health Establishments, 2018 using CETIC.BR methodology, Uruguay.

Note: Data about the usage of computers in the last 12 months in El Salvador's public sector is for administrative and/or management usage.

Table 15 – Internet usage in Latin America and the Caribbean

	Fixed-broadband subscriptions per 100 inhabitants	Mobile-cellular telephone subscriptions per 100 inhabitants	Percentage of individuals using a computer	Percentage of individuals using a mobile	Percentage of Individuals using the Internet	Proportion of households with computer	Proportion of households with fixed line telephone	Proportion of households with internet access at home	Proportion of households with mobile-cellular telephone	Proportion of households with radio	Proportion of households with TV	Percentage of the population without ID	Percentage of under recorded births
	2018	2018	2018	2018	2018	2019	2019	2019	2019	2019	2019	2018	2018
Argentina	19.1	59.1	44.8*	81.2*	74.3*	64.3**						2.0	0.5
Bahamas	22.6	94.2			85*								
Barbados	31.2	111.7			81.8*								
Belize	6.4				47.1*	36.1	7.2	57.5	93.6	58.7	78.7		4.8
Bolivia	4.4	107.3	29.7	69.7	44.3	24.9*		16.2*		43.9*	81.2*		11.2
Brazil	14.9	43.1	38.6	88.0	70.4	41.8*	24.1*	66.7*	92.8*	62.4*	95.6*		10.0
Chile	17.4				82.3*	60.2**		87.5**					0.1
Colombia	13.4	192.8*	44.9	85.2	64.1	41.6*	29.2*	52.7*	95.2*	69.7*	90.7*		1.4
Costa Rica	16.7	132.1	59.1*		74.1	50.4*	36.6**	73.1*	94**	62.1**	95.7**		0.4
Dominican Republic	7.5	121.3	40*	85.8*	74.8	26.7*	24.2**	31.6*	90.9**	55.3**	85.4**	9.2	13.1
Ecuador	11.4				57.3*	40.7**	36.9**	37.2**	90.7**	25.9**	71.8**	5.4	16.7
El Salvador	7.7		19.3*	80.9*	33.8*	15.7**	18.6**	17.1**	92.6**	28.6**	87.1**		1.5
Guatemala	3.1*	113.6			65*								2.9
Guyana	8.4*	123.5			37.3*								
Haiti	0.3	103.9			32.5	11*		7*					
Honduras	3.7	99.0			31.7*	17.1**						4.5	2.0
Jamaica	9.7	133.3	31**	82.6**	55.1*	36.4**	11.2***	52.9**		73.2***	89.9***		0.5
Mexico	14.5	100.2	45.0	73.5	65.8	44.9*	37.5*	52.9*	89.7**	56.2*	92.9*		3.6
Nicaragua	3.0	114.9			27.9*								15.3
Panama	12.9	122.9			57.9*								4.4
Paraguay	4.6	99.7	23.4	84.3	65.0	25.4*	9.3*	24.4*	96.7**	76.4*	91*	7.3	15.5
Peru	7.4*	85.5	31.6	80.7	52.5	32.4*	20.6*	29.8*	90.9**	71.9*	80.2*	0.7	0.7
Suriname	12.7	82.4			49.0*	36.8**	46.3***	33.5**					
Trinidad and Tobago	24.5	103.1*			77.3*								
Uruguay	28.3	93.3	54.4	76.7	74.8	69.1*	62.8*	66.2*	94.8**	79.5*	96.6*	1.0	0.2
Venezuela	9.0	100.8			72.0								

Source: Data from ITU - COUNTRY ICT, IDB.

Notes: Numbers with * have data for 2018; ** data is from 2017; *** is from 2016.

Table 16 – Overview of established HTA bodies in Latin American & the Caribbean

Country	Established HTA body	Identified HTA activities in the country
Argentina	HTA unit, Ministry of Health (MoH)	Yes
Belize	No	Yes
Bolivia	<i>Comité Nacional de Evaluación y Uso Racional de Tecnologías en Salud (CNET)</i>	Yes
Brazil	<i>Comissão Nacional de Incorporação de Tecnologias (CONITEC)</i>	Yes
Chile	<i>Evaluación de Tecnologías Sanitarias (ETESA)</i>	Yes
Colombia	<i>Instituto de Evaluación Tecnológica en Salud (IETS)</i>	Yes
Costa Rica	HTA commission, Caja Costarricense de Seguro Social	Yes
Dominican Republic	No	No
Ecuador	HTA unit, Ministry of Health (MoH)	Yes
El Salvador	HTA unit, Ministry of Health (MoH)	Yes
Guatemala	No	No
Guyana	No	No
Honduras	No	No
Jamaica	No	Yes ^{a,b,c}
Mexico	<i>Centro Nacional de Excelencia Tecnológica en Salud (CENETEC)</i>	Yes
Panama	No	Yes ^a
Paraguay	No	Yes ^{b,c}
Peru	<i>Instituto de Evaluación de Tecnología en Salud e Investigación (IETSI); Instituto Nacional de Salud (INS)</i>	Yes
Suriname	No	Yes
Trinidad and Tobago	No	Yes
Uruguay	<i>Ministerio de Salud Pública; Fondo Nacional de Recursos (FNR)</i>	Yes

Adapted from Lessa et al. (2017) as presented in York University Study.

aHTA activity: pricing decision; bHTA activity: coverage/reimbursement decisions; cHTA activity: develop clinical guidelines based on HTA.

Table 17 – Percentage of households with catastrophic health expenditures

Country	> 10%		> 25%	
	of household	Std. Error	of household	Std. Error
Guatemala	9.9	0.5	4.7	0.4
Honduras	9.7	0.6	4.3	0.4
Mexico (Chiapas)	13.8	0.5	6.0	0.4
Nicaragua	8.9	0.7	3.5	0.4
Panama	4.6	0.9	2.5	0.7
El Salvador	18.4	0.7	8.9	0.5

Source: results based on Dansereau (2019).

Note: The author used the SDG definition for catastrophic health expenditure: Out-of-pocket health expenditures less insurance reimbursement, divided by total household consumption.

**ANNEX III. OPERATIONS INCLUDED IN THE SAMPLE AND DOCUMENT REVIEW
FOR THE SECTION ON LESSONS LEARNED**

Number	Name	Approval Year
<u>AR-L1020</u>	Strengthening the Basic Health Care Strategy	2007
<u>AR-L1142</u>	Multiphase Primary Health Care Program for Managing Chronic Non-Communicable Diseases	2012
<u>AR-L1196</u>	Multiphase Primary Health Care Program for Managing Chronic Non-communicable Diseases	2016
<u>BO-L1067</u>	Strengthening of Integrated Health Networks in the Department of Potosí	2011 / 2017
<u>BR-L1177</u>	Expansion and Strengthening of Specialized Health Services in Ceará	2009
<u>ES-L1027</u>	Integrated Health Program	2010
<u>HO-L1059</u>	Program for Improved Accessibility and Quality of Health Services and Networks	2013
<u>HO-L1090</u>	Program for Improved Accessibility and Quality of Health Services and Networks	2013
<u>ME-L1128</u>	Growing healthy; strengthening healthcare for Mexican Children	2012
<u>NI-L1082</u>	Modernization of Infrastructure and Management of Hospitals - Western Region	2014
<u>PN-L1068</u>	Health Equity Improvement and Services Strengthening Program	2011

Note: The review included Project Completion Reports (PCR); Project Monitoring Reports (PMR); Loan Proposals; Technical Notes; Impact Evaluations; OVE Country Program Evaluations for [Brazil \(2015-2018\)](#), [Chile \(2014-2018\)](#), and the [Dominican Republic \(2013-2016\)](#); and other relevant documentation. Other operations that were reviewed included [CR-T1111](#), RG-T2571 (responding to Ebola); ME-T1137 (supporting Mexico's response to AH1N1); RG-T2869 (regional strategic management program for epidemiological emergencies); RG-T2870 (Caribbean compliance with IHR); RG-T2687 (Regional Tourism Health Information Phase I); and RG-T3324 (Regional Tourism Health Information Phase II).

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