Final End-of-Biennium 2018-2019 and Strategic Plan 2014-2019 Assessment Report

Category 4: Health Systems

Table 1. Category 4 Programmatic Summary

Program area	Rating 2014-2015	Rating 2016-2017	Rating 2018-2019	Output indicator rating	Outcome indicator rating
4.1 Health governance and financing; national health policies, strategies, and plans				2/5 achieved 3/5 partially achieved	0/2 achieved 2/2 partially achieved
4.2 People-centered, integrated, quality health services				1/2 achieved 1/2 partially achieved	1/1 partially achieved
4.3 Access to medical products and strengthening of regulatory capacity				2/4 achieved 2/4 partially achieved	2/2 partially achieved
4.4 Health systems information and evidence				3/7 achieved 4/7 partially achieved	2/2 partially achieved
4.5 Human resources for health				0/3 achieved 3/3 partially achieved	0/3 achieved 3/3 partially achieved
Category 4 summary				8/21 achieved 13/21 partially achieved	0/10 achieved 10/10 partially achieved

 Met expectations  Partially met expectations

Overview of the Category

Category 4 focuses on the development and strengthening of health systems based on primary health care; development of policies, plans, and strategies to strengthen health governance and financing toward progressive realization of universal access to health and universal health coverage; organization of people-centered, integrated health service delivery; promotion of access to and rational use of health technologies; strengthening of health information and research systems and integration of evidence into health policies and health care; and development of human resources for health.

The third biennium of the Pan American Health Organization (PAHO) Strategic Plan 2014-2019 has allowed the Pan American Sanitary Bureau (PASB) to consolidate universal health as one of the strategic priorities of Member States for the future and as a frame of reference for health systems strengthening. In line with strategic orientations provided by the Strategy for Universal Access to Health and Universal Health Coverage (CD53/5), five important resolutions were approved by Member States during the 2018-2019 biennium: *a)* Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018-2023 (CD56.R5); *b)* Plan of Action for Strengthening Information Systems for Health 2019-2023 (CD57.R9); *c)* Strategy and Plan of Action on Donation and Equitable Access to Organ, Tissue, and Cell Transplants 2019-2030 (CD57.R11); *d)* Strategy and Plan of Action to

Improve Quality of Care in Health Service Delivery 2020-2025 (CD57.R12); and *e)* Expanded Textbook and Instructional Materials Program (PALTEX) (CD57.R15). In addition, in 2019 information documents were prepared to provide an analysis of the regional situation in relation to priority areas of work, including primary health care). These reference documents and frameworks, combined with the revision of the essential public health functions approach and the launch of the PAHO Monitoring Framework for Universal Health, are providing Member States with comprehensive and integrated guidance on transforming their health systems toward universal health.

Following the launch of the Regional Compact on Primary Health Care for Universal Health: PHC 30-30-30 by the Director of PAHO in Mexico City in April 2019, efforts to transform health systems toward equitable, comprehensive, and inclusive health care models based on primary health care (PHC) have been accelerated. On 23 September 2019, the United Nations General Assembly held a high-level meeting, "Universal Health Coverage: Moving Together to Build a Healthier World," to mobilize political support at the highest level to ensure that all people receive the health care and protection they need. The Compact on Primary Health Care for Universal Health was launched, calling on Member States to advance health sector reforms based on the PHC approach. There is considerable work underway in Member States to transform health systems toward universal health, and 34 countries report ongoing health reforms during the biennium; 26 of these efforts include policy options to address health financing. Public expenditure in health continues to slowly increase in the Region and is now equivalent to 4.2% of gross domestic product (GDP), still well below the regional benchmark of 6%. Nonetheless, health service coverage indices have increased over the past five years, and out-of-pocket expenditures have decreased marginally. Progress is reported on the organization of health service networks with a focus on strengthening the resolution capacity of the first level of care, through new legal frameworks, road maps, and policies, and on expanding services through the redefinition and reorganization of services in municipal, departmental, or national networks.

During the 2018-2019 biennium, health systems faced many external events that impacted their response capacity and the health of the population. These included natural disasters, mainly hurricanes and earthquakes, as well as disease outbreaks, mass migration, and social and political unrest. PASB responded by providing technical support to enable countries to increase the surge capacity of health systems and services, scale up health services, and continue the development of adaptive, responsive, and resilient health systems. PASB also supported the integration of migrant health in key national initiatives and subregional migration-related policies. This included support to the Central American Parliament (PARLACEN) in the adoption of reference legislation aimed at improving the health of migrants.

Access to medicines remained a high priority for Member States during the biennium. Thirty-four of the 35 PAHO Member States have now signed agreements to use the PAHO Regional Revolving Fund for Strategic Public Health Supplies (Strategic Fund). In 2019, procurement of essential medicines, diagnostic kits, and vector control supplies through the Strategic Fund increased by 17% over the previous year. PASB responded to increased demand for technical support in pricing of medicines and health technologies by launching the Regional Initiative for Information Exchange on Prices, Coverage and Economic Regulation of Health Technologies. Advances were also made in strengthening regulatory systems for medicines and other health technologies. The Caribbean Regulatory System has spurred regulatory reforms in the Caribbean Community (CARICOM), speeding up access to quality medicines and monitoring the quality of medicines on the market. Central American authorities have come together to develop a regional approach to regulation of medicines and have officially launched the Central American Regulatory Mechanism with the support of PAHO, the World Bank, and the United States Agency for International Development (USAID). The Regulatory Exchange Platform – secure (REPs) launched two modules: Medical Device Single Audit Program (MDSAP) and Regulatory Information Secure Exchange (RISE). The latter module allows National Regulatory Authorities to share regulatory information, strengthening regulatory systems through a collaborative process.

Thirty-three countries in the Region are now member states of the International Atomic Energy Agency, and Suriname is in the process of applying.

The coverage and quality of birth and death records has improved across the Region of the Americas. Member States have made concerted efforts to prioritize vital statistics and invest in information systems for health (IS4H) in order to facilitate the collection of quality data. They have committed to taking a holistic approach to strengthening information systems following the approval of the regional Plan of Action for Strengthening Information Systems for Health 2019-2023. This plan presents a series of targets for improving the data management and governance practices of countries and territories with a view to improving data quality and coverage in order to better inform programmatic decisions and policies. The information systems of 18 countries and territories have undergone assessments using the IS4H maturity assessment tool developed by PASB. Some of this work is supported by the Inter-American Development Bank, which has approved US$47 million for investments to strengthen IS4H in the Region.[1]

In response to the needs of countries, PASB has scaled up work in a number of key areas. There have been significant achievements in the following: *a)* development of integrated health networks and performance assessment of health services, resulting in expansion of access and better quality of care; *b)* health financing and governance, with countries developing integrated health financing frameworks aligned with national policies and road maps toward universal health; *c)* strengthening information systems for health and providing guidance for IS4H governance complemented by eHealth strategies; *d)* health research, promoting a significant increase in the production of evidence to guide health systems transformation; *e)* health workforce development at regional and national levels; *f)* health education, with the PAHO Virtual Campus for Public Health assuming leadership as a virtual learning platform for health professions throughout the Region; *g)* access to medicines, with the scaling up of activities through the PAHO Strategic Fund; and *h)* regulatory systems development, with innovative national and multi-country regulatory systems under construction. In addition, the relationship with the legislative branch of government is being continuously strengthened through annual congresses with the health commissions of the parliaments of the Region, seeking to build a harmonized legislative agenda.

At the end of the 2018-2019 biennium and the Strategic Plan 2014-2019, the overall rating for Category 4 is that it has partially met expectations. Solid achievement was noted with respect to output indicators: eight of the 21 output indicators were achieved and the remaining 13 were partially achieved, with five of the partially achieved indicators being over 75% achieved. Outcome indicators were, on the whole, partially achieved, but strong progress was demonstrated, with four of the partially achieved indicators being 70% achieved. Two of the five program areas under Category 4 met expectations, having achieved four of nine output indicators, but with high levels of partial achievement among countries within those four indicators. The remaining three program areas partially met expectations, with four of 12 output indicators achieved and eight partially achieved. Despite significant advances in the quality and coverage of health data, weaknesses in information systems for health in many countries have led to gaps that have an impact on the targeting of health resources. Information systems in many Member States vary in terms of coverage and quality, with weaknesses particularly noted in areas with significant inequalities and vulnerable populations.

[1] All dollar amounts are US dollars unless otherwise indicated.

Programmatic Implementation by Outcome

4.1 Health Governance and Financing; National Health Policies, Strategies, and Plans

Overview

This program area provides support to countries in their efforts to strengthen their health systems in alignment with the Strategy for Universal Access to Health and Universal Health Coverage. It strives to foster an integrated and sustainable approach to technical cooperation, including coordination with other categories. Progress has been made in the implementation of this program area, as many countries moved forward during the biennium with the definition of national health policies, strategies, and plans for health governance and financing. Nevertheless, increased political commitment will be needed to reach the goals set for this program area. This will require efforts to advance participatory national dialogues; to strengthen the leadership and stewardship of national health authorities, so they can implement health systems transformation processes consistent with universal health; to close the health financing gap; and to strengthen health legislation and regulatory frameworks in the Region.

Main Achievements

- In 2018-2019, to mark the 40th anniversary of the Declaration of Alma-Ata, PAHO stepped up advocacy and regional initiatives to promote health system transformations toward universal health. PAHO Director Dr. Carissa F. Etienne convened the High-Level Commission on Universal Health in the 21st Century: 40 Years of Alma-Ata, chaired by Dr. Michelle Bachelet and Ambassador Néstor Mendez and made up of an interdisciplinary group of 17 regional experts. The Commission's report, presented in April 2019 in Mexico City, offers a path for action on primary health care, which is conceived as a comprehensive strategy by which to act on social determinants and create specific spaces for communities to take part in 21st-century models of care. Following the presentation of this report, the Director of PAHO launched the Regional Compact on Primary Health Care for Universal Health. PAHO also participated actively in development of the Astana Declaration on Primary Health Care, adopted at the Global Conference on Primary Health Care in 2018. Finally, PAHO took part in preparation of the Political Declaration of the High-Level Meeting on Universal Health Coverage, adopted during the UN High-Level Meeting on Universal Health Coverage in September 2019. These declarations reaffirm the right of every human being to the enjoyment of the highest attainable standard of physical and mental health, without distinction of any kind.

- PAHO has succeeded in fostering and directly supporting the development of comprehensive health strategies, plans, and policies to support the advance toward universal health in the countries. Thirty-three countries and territories are implementing actions toward the progressive realization of universal health, including substantial health sector reforms, legislation changes, and/or the definition of strategies, plans, and road maps (Anguilla, Antigua and Barbuda, Argentina, Bahamas, Barbados, Brazil, British Virgin Islands, Bolivia, Canada, Chile, Colombia, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Grenada, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Suriname, Turks and Caicos, United States of America, Uruguay, and Venezuela). Of those countries, 26 included policy options on financing to make broader health sector reform more feasible and sustainable. As an example of these efforts, in 2019 El Salvador's National Assembly approved innovative legislation that provides the basis and tools to promote the integration of the segmented health system in the country.

- The essential public health functions (EPHF) framework was used to guide the formulation of strategies, plans, and policies and to strengthen the stewardship capacity of the national health authorities. These efforts have been carried out through interdisciplinary direct technical collaboration that includes the development of road maps, studies, and analysis to support decision making (fiscal space and allocation of resources), participation in working groups of policy makers, discussions of laws and their content, collaboration with state agencies of both the government and the legislative authority, as well as facilitating national dialogues on health systems transformation and reforms with key actors in government, academia, and civil society. In this context, the EPHF conceptual framework was updated through inter-programmatic work within PAHO and consultations with external experts from 15 schools of public health in 11 countries.

- In 2018-2019, PAHO supported the generation of evidence to improve decision making for health systems policies and strategies consistent with universal health. During the biennium, 12 countries and territories conducted analyses that enabled them to measure progress toward universal health, achieving the target set for 2019 in the Strategic Plan 2014-2019. PASB directly supported assessments in four of those 12 countries (Belize, El Salvador, Guyana, and Jamaica). The experiences in El Salvador and Jamaica were important highlights. Both countries applied the PAHO framework and methodology to conduct comprehensive assessments of their health systems reform. The results from these assessments served as inputs for Jamaica's Vision for Health 2030: Ten-Year Strategic Plan 2019-2030 and for the approval of El Salvador's Integrated National Health System Law in 2019.

- To better respond to new data needs related to the Sustainable Development Goals (SDG) agenda and PHC 30-30-30, PASB produced methodologies of key indicators of access barriers to health services, financial protection in health, and health spending statistics across 29 Member States. In addition, PASB provided case studies on the role of the private sector in health care reforms, approaches to define packages of health services, and options to improve fiscal space for health in 17 countries. This resulted in the publication of 11 peer-reviewed articles in the Pan American Journal of Public Health. Similarly, the financial protection statistics generated by PAHO were used for the Global Monitoring Report on Financial Protection in Health 2019 and for Primary Health Care on the Road to Universal Health Coverage: 2019 Global Monitoring Report, which was presented by the World Health Organization (WHO) to the UN General Assembly in 2019. A book entitled Fiscal Space for Health in Latin America and the Caribbean was also published in 2019.

- To strengthen country capacity in health economics and financing, 19 countries and territories took steps to institutionalize the production and analysis of data on health expenditure, including its sources, management, composition, and allocation toward the benchmark of 6% of GDP, using standardized 2011 System of Health Accounts (SHA2011) methodology. In addition, 36 countries updated health expenditure estimates for global reporting in the WHO Global Health Expenditure Database (GHED) from 2000 to 2017. Specific interventions to improve and broaden health expenditure statistics took place in eight countries: Argentina, Costa Rica, Cuba, Honduras, Panama, Paraguay, Peru, and Uruguay. Training was offered to most countries and territories in the construction of indicators of financial protection related to catastrophic health expenditure and impoverishing health expenditure. The first version of the SHA2011 course was developed in Spanish and taken by 130 participants in 18 countries across the Region; a translation to English was completed in 2019. A draft version of the health economics and financing course was produced.

Challenges

- Complex political and national contexts continue to challenge health systems, complicating efforts to design and implement comprehensive road maps to advance toward universal health. Limited capacity of national health authorities to steer, lead, and govern transformation and strengthening processes, and limited dialogue with

civil society, results in fragmented approaches that slow and impede efforts to increase equity and efficiency. This includes a lack of dialogue between ministers of finance and ministers of health regarding constraints and opportunities, both for increasing funding levels and for making better use of funds to achieve health system goals. In a context of weak governance and stewardship, the contribution of different stakeholders, both national and international, can deepen fragmentation.

- The strengthening and/or review of national health-related law and regulatory frameworks to achieve realization of the right to the highest attainable standard of health continues to be a challenge for Member States.

- Political and institutional changes in countries and territories often occur too rapidly to allow consolidation of an effective transformation of their health systems. In many cases the reform agenda is not defined sufficiently, and it is not always possible to measure short- or medium-term results. Adapting technical collaboration to rapidly changing scenarios, sometimes involving prolonged social upheaval in Member States, continues to be an important challenge and a new element to be considered in the development of technical cooperation approaches.

- Public health expenditure has increased, but at a relatively slow pace. It has not been sufficient to replace out-of-pocket spending as a source of financing and to increase financial protection of households. The increasing costs of medicines and health technologies explain a large share of this trend. Spiraling costs challenge the weakened regulatory capacity of the national health authorities in terms of their ability to introduce new medicines and technologies and to control prices. They also undermine the effective coverage of the current health financing schemes in the Region.

- Availability of data and the state of information systems, combined with limited capacity for monitoring health policies and reform processes in countries, is an ongoing challenge. In those countries that collect information on a regular basis, actions are needed to articulate monitoring efforts with the policy-making process. Notwithstanding the efforts made by some countries, there is still a lack of commitment in many countries to institutionalize and strengthen their own capacity to measure and analyze health spending levels and funding flows in a continuous and standardized manner, using SHA2011 methodology.

Lessons Learned

- The leadership role of the health authorities should be strengthened, based on their technical and political capacities, so that they can conduct processes of health systems transformation in coordination with other Member State agencies and with the participation of social stakeholders. There is a need to develop strong legal frameworks to support national health authority functions and activities and to shield health systems from political changes.

- A comprehensive and integrated approach to health governance is a linchpin of institutional transformations aimed at achieving equitable access to health services. It is important to establish interconnected mechanisms for regulation of financial resources, human resources, and health technologies and services, and to strengthen the essential public health functions. Greater social participation in health policy planning, implementation, and oversight needs to be fostered to promote more responsive policies and to ensure transparency and sustainability.

- The Regional Compact on Primary Health Care for Universal Health: PHC 30-30-30 has awakened interest in this strategy, encouraging countries to operationalize the changes needed and to measure their progress toward the proposed targets and indicators. This reinforces the need to continue building capacities in countries to better understand and measure access barriers to health; to understand and integrate health financing aspects in policy

making, focusing on the three main functions of revenue collection, pooling, and allocation; and to strengthen the stewardship role of national health authorities for the formulation and implementation of policy options to advance toward universal health.

- In a turbulent and changing Region, political shifts create important risks for setbacks. The universal health strategy recognizes that such risks exist. PAHO should continue to be proactive and alert countries to policies that could undermine their efforts to advance toward universal health.

- Finally, dialogue between the health authorities and the economic authorities of the countries, especially the ministries of finance, must continue to be strengthened with a view to achieving the necessary financial priority for health and for processes toward universal health.

Cross-cutting Themes

- The core principles of the universal health strategy are the right to the highest attainable standard of health, along with equity and social solidarity. Country policies and health systems transformation processes continue to be developed based on these principles. They are also reflected in the work of the High-Level Commission on Universal Health in the 21st Century: 40 Years of Alma-Ata, forming the basis of the Commission's report in 2019.

- In addition, PASB continued its work on cross-cutting themes through regional monitoring of key indicators for universal health goals in 2019. The results present evidence on how Member States are making progress toward improving equity and guaranteeing the human right to health.

- The cross-cutting theme of equity is applied across the Organization to improve health outcomes and reduce inequities in health. In this context, financial protection reduces inequality in access to health services. The replacement of direct payments by pooling mechanisms based on solidarity, with different sources of financing, can be an effective strategy for increasing equity in health systems of countries in the Region.

4.2 People-Centered, Integrated, Quality Health Services

Overview

This program area aims to transform the organization and management of health services through the development of people- and community-centered models of care to expand equitable access to quality services. Specifically, it supports the resolution capacity of the first level of care, development of country capacity for implementation of the integrated health service delivery networks (IHSDN) framework, and other instruments and tools. During 2018-2019, the Region continued to make advances, with more Member States implementing IHSDNs and other interventions to increase the resolution capacity of the first level of care and the integration of priority programs in health care delivery.

Main Achievements

- Twenty-four countries and territories have developed their national capacity for implementation of the IHSDN framework. The focus is on strengthening the resolution capacity of the first level of care, through new legal frameworks, road maps, and policies, and on expanding services through the redefinition and configuration of the structure and organization of services in municipal, departmental, or national networks; and through human resources training using the online virtual course on integrated health service networks).

- Seven countries have implemented the updated Productive Management Methodology for Health Services: Brazil, Chile, Dominican Republic, Ecuador, El Salvador, Honduras, and Panama. In the case of Chile, it has been

possible to calculate the cost of avoidable hospitalizations using the Production, Efficiency, Resources and Costs (PERC) methodology for Productive Management of Health Services. In El Salvador, the Ministry of Health implemented the PERC in more than 700 facilities in its network of outpatient health services.

- To support the reduction of maternal mortality, the Assessment of Essential Conditions (AEC) tool was adapted as a means to identify opportunities for improvements in maternal care. Training was provided to professionals from 12 countries identified as priority countries for the reduction of maternal mortality, and the assessment was conducted in six countries. Cuba incorporated the AEC as a tool for its national quality program in hospitals.

- Twenty-four countries have a formal national department or unit with responsibility for quality and patient safety and/or national policies, plans, or programs. Despite this progress, mortality attributed to poor quality of care is high, and access to quality health services continues to be a challenge. The need for a paradigm shift in the approach to quality led to the request from Member States to develop the Strategy and Plan of Action to Improve Quality of Care in Health Service Delivery 2020-2025 (CD57/12), which was approved during the 57th Directing Council of PAHO.

- Implementation of a grant from Gavi, the Vaccine Alliance, contributed to PASB work to strengthen health systems and services response for the expansion of immunization services. Gavi post-transition proposals were developed and approved for Bolivia, Guyana, and Honduras (key countries) and for Cuba, totaling approximately $3.2 million. These proposals aim to provide catalytic support for countries that are graduating from Gavi, that is, transitioning out of Gavi support and toward self-financing of their immunization programs. In addition, Gavi contributed $8.6 million to Haiti for the strengthening of family health teams and training of community health workers as part of the implementation of the model of care. At the regional level, three post-transition proposals were developed for immunization demand generation and communication, national immunization technical advisory groups, and health accounts to support immunization programs in Gavi countries. Excellent work has been carried out in coordination with the PASB Immunization Unit.

- PASB developed a proposal to support a more systemic approach to priority programs and interventions in health. It aims to strengthen the progressive integration of priority programs within health systems, ensuring that the targeted services are incorporated in a structured and organized manner throughout the health service delivery network. The goal is to ensure sustainability and impact while focusing on the comprehensive needs of people, families, and communities. The proposal will be piloted in important initiatives, including the PAHO Disease Elimination Initiative and the HEARTS initiative.

- Under a $1.75 million agreement with the Costa Rican Social Security Fund (CCSS), the Organization will conduct an independent assessment of the Fund's capacity and the quality of outcomes related to health services delivery. The assessment, to be carried out by PAHO in collaboration with the World Bank, will help improve processes for measuring health outcomes within the CCSS. Similar initiatives are being supported in Nicaragua and are under development for El Salvador.

Challenges

- Efforts to improve access to quality health services face persistent challenges. They include fragmentation of quality improvement initiatives, with vertical programs predominating at the expense of comprehensive and systematic approaches. Other obstacles are an approach to access and coverage that fails to emphasize quality; low response capacity in health services, especially at the first level of care; difficulties in implementation and oversight of quality standards; a context unfavorable to a culture of quality; inadequate availability, capacity,

and continuing education of human resources for health; limited access to medicines and other health technologies; and insufficient and inadequate financing.

- The proliferation of international initiatives within the Region to measure the impact of primary health care constitutes a challenge for countries, as these initiatives in many cases are not consistent with PAHO mandates and guidance for health systems based on primary health care, and measurement is principally focused on the first level of care. The development of a global monitoring and evaluation tool currently in development through WHO, with PAHO support, presents an opportunity to structure and organize these processes.

- Availability and use of data to inform the organization and management of health services continues to be insufficient. For example, only 12 countries made data available on hospital discharges for the purpose of calculating hospitalizations amenable to ambulatory care; and of those 12, calculations were possible for only seven countries. This information is essential to informed decision making for the management of health networks.

Lessons Learned

- The push to organize and strengthen integrated health services networks in the Region has led to increased demand for technical support, including on the financial aspects of IHSDNs. This requires increased inter-country sharing of knowledge and experience, capacity building, and the mobilization of additional experts to address the needs of countries.

- There is an increased recognition in countries that health services organization and delivery must focus on the needs of people and communities within a given territory; must be based on the primary health care strategy and the development of integrated health networks; and must prioritize the recruitment and participation of health workers from that territory. Social participation and oversight of the availability and quality of services ensures the continuous adaptation of health services delivery based on needs.

- To improve quality, a paradigm shift is needed. Priority should be given to interventions with a health system and intersectorality perspective, strengthening the first level of care and its linkages with the other levels. Empowerment and participation of people, including health workers, is key. It is not enough simply to optimize processes: there must be a focus on health outcomes and on improving the experiences of people, families, and communities with the health services, building their trust.

- Capacity building for the production and analysis of health services information is required to strengthen management, planning of service delivery, and resource allocation.

Cross-cutting Themes

- A protocol to analyze the relationship between maternal mortality due to hemorrhage and the availability and management of blood for transfusion was developed and piloted in Honduras and Paraguay.

- As a result of an inter-programmatic effort, the Report of the Director on Addressing the Causes of Disparities in Health Services Access and Utilization for Lesbian, Gay, Bisexual and Trans (LGBT) Persons (CD56/INF/11, Corr.) was presented during the 56th Directing Council of PAHO.

4.3 Access to Medical Products and Strengthening of Regulatory Capacity

Overview

This program area aims to promote access to and rational use of safe, effective, and quality medicines and other health technologies as countries move toward universal access to health and universal health coverage. It includes policy development, and as part of its technical cooperation, PASB has developed and presented several policy documents to Member States on these topics. Through their adoption, Member States commit to working together on the development of policies, strategies, and legal frameworks to improve equitable and timely access to quality-assured medicines and other health technologies by improving the affordability of medical products, thus ensuring financial protection of individuals, families, and communities. The program area also aims to strengthen regulatory systems and improve the capacity to regulate the pharmaceutical sector, including radiological, pharmaceutical, and blood services; strengthen the national supply system; and promote the rational selection and use of medicines and health technologies.

Main Achievements

- To improve access to and affordability of medicines in Member States, countries have been seeking to improve information on pricing and to develop policies, strategies, and regulations related to pricing strategies. In 2018 PAHO launched the Regional Initiative for Information Exchange on Prices, Coverage and Economic Regulation of Health Technologies. Thirteen countries now participate: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Honduras, Mexico, Panama, Paraguay, Peru, and Uruguay.

- Thirty-four of 35 PAHO Member States have now signed agreements to use the Strategic Fund. By end 2019, there was a 17% increase over the previous year in the procurement of essential medicines, diagnostic kits, and vector control supplies. The Capital Fund grew to $20 million, providing interest-free credit lines to Member States during the biennium. The PAHO Strategic Fund collaborated with the HEARTS Initiative and Resolve to Save Lives to rationalize the list of hypertension control medicines as part of efforts to standardize treatment protocols and the introduction of fixed-dose combination medicines. The Strategic Fund also participated in a side event at the 57th PAHO Directing Council to showcase the achievements of the Fund, in collaboration with the regional hepatitis program, to reduce the pricing of hepatitis C antivirals.

- In order to guide the rational selection and use of medical devices, PAHO has developed a list of priority medical devices for the first level of care, the first of its kind. The list comprises a core set of 208 medical devices and an additional 129 devices in the modules of odontology, laboratory, and imaging diagnostics. The list was validated in 17 health units: six in Paraguay, five in Bolivia, three in Costa Rica, and three in Argentina. Member States also have access to the Exchange of Reports on Adverse Events of Medical Devices (REDMA) program. The first year of the program made possible the exchange of 17 adverse events reports to 14 regulatory authorities currently participating in the program. The Region has continued to improve its post-market surveillance capacities for pharmaceuticals and vaccines. The Caribbean pharmacovigilance network, VigiCarib, has been relaunched and has issued close to 200 reports of adverse events and substandard and counterfeit medicines through its pharmacovigilance and post-market surveillance program. Moreover, active pharmacovigilance programs for malaria and tuberculosis have been strengthened through a pilot supported with funds from the Bill & Melinda Gates Foundation in Brazil, Honduras, Paraguay, and Peru.

- To promote donations and equitable access to organ, tissue, and cell transplants, Member States adopted a PAHO strategy and plan of action for 2019-2030 during the 57th Directing Council. Additionally, an agreement was signed with the Ibero-American Network/Council on Donation and Transplantation (RCIDT), sponsored by the National Transplant Organization of Spain, to collaborate in implementation of the plan of action in Latin America countries. In the Caribbean, Antigua and Barbuda, the Bahamas, Barbados, Guyana, and Jamaica defined a two-year work plan to be implemented.

- To strengthen systems for regulation of medicines and other health technologies, Member States have moved forward with the adoption of the WHO Global Benchmarking Tool, available in English, Spanish, and French. Self-assessments of regulatory capacities were completed in 2019 by Bolivia, Costa Rica, and Paraguay, and a joint assessment was performed by PAHO and WHO in Peru. Several e-learning courses were offered, including courses on regulation of biological products and regulatory capacity for medical devices. In addition, the Cooperation among Countries for Health Development (CCHD) initiative, aiming at promoting South-South cooperation toward regulatory strengthening, was approved and endorsed by 16 Member States. This innovative proposal brings together the National Regulatory Authorities of reference and recipient countries that are seeking to improve their regulatory systems.

- The Caribbean Regulatory System (CRS) is spurring regulatory reforms in CARICOM, speeding up access to quality medicines and monitoring quality of medicines on the market. Countries are beginning to adopt efficiencies such as information sharing, regulatory reliance, and digital systems. Six registering countries in CARICOM (Belize, Guyana, Haiti, Jamaica, Suriname, and Trinidad and Tobago) agreed to participate in the CRS registration and pharmacovigilance/post-market surveillance scheme. Over 65 products were recommended, including many essential generic medicines for noncommunicable diseases, innovators, biosimilars; hundreds of reports were submitted to WHO on adverse events and counterfeit medicines, some triggering regulatory actions. The Caribbean Public Health Agency (CARPHA), through its Medicines Quality Control and Surveillance Department, adopted and is implementing risk-based post-market surveillance. A business plan has been developed to support a sustainable CRS model.

- Central American authorities have come together to develop a regional approach to regulation of medicines and have officially launched the Central American Regulatory Mechanism with the support of PAHO, the World Bank, and USAID. This initiative relies on a multi-country approach to accelerate market entry and improve availability of quality medicines while ensuring efficiencies and best use of resources in the subregion. Countries will jointly assess and evaluate the product dossiers for issuing marketing authorization, with PAHO serving as a permanent technical coordinator.

- The Pan American Network for Drug Regulatory Harmonization (PANDRH) has eight ongoing projects to promote information sharing and strengthen regulatory capacity and reliance practices in the Region. These include projects on antimicrobial resistance, biologicals, medical devices, regulatory information sharing, Strategic Fund medical products, and Certificate of Pharmaceutical Product.

- The Regulatory Exchange Platform – secure (REPs) launched two modules: Medical Device Single Audit Program (MDSAP) and Regulatory Information Secure Exchange (RISE). The MDSAP module has 2,950 audit reports and 520 facilities. RISE is the exclusive module for National Regulatory Authorities (NRAs) to share regulatory information, strengthening regulatory systems through a collaborative process. A memorandum of understanding between PAHO and participating NRAs has been developed to facilitate the exchange of non-public information and reports by auditing organizations through the REPs.

- Active pharmacovigilance projects have started for drug-resistant tuberculosis and malaria. These involve exchange of strategic information, alerts (more than 200 in the past two years), and collaborative projects (e.g., joint assessment of regulatory documents) through regional networks of focal points on pharmacovigilance and substandard/counterfeit medical products.

- As of the end of 2019, 33 countries in the Region are now member states of the International Atomic Energy Agency (IAEA), and Suriname is in the process of applying. This has allowed the IAEA, working jointly with PAHO, to design and implement technical cooperation projects and activities on regulatory infrastructures, diagnostic and radiotherapy services, radionuclear emergencies, International Health Regulations (IHR) core capacities, and

cancer control. In particular, the CARICOM countries have increased their membership in the IAEA and thus can benefit from technical cooperation and resources provided by that agency. Overall, radiological health capacities including radiation safety in the Caribbean have significantly improved during the biennium.

- Supply chain management systems for national medicines and other health technologies are being supported through a collaborative project between PAHO and the Global Fund to Fight AIDS, Tuberculosis and Malaria. This project was extended for an additional three years, until mid-2021. The eight participating countries (Bolivia, Cuba, Guatemala, Honduras, Ecuador, El Salvador, Nicaragua, and Paraguay) now have updated characterizations of their supply chain management systems and a clear work plan for improving current systems and moving toward integrated systems. The project is already having an impact through the new integrated supply system in Paraguay. All milestones set by the Global Fund were accomplished, including a complete baseline of key indicators that will permit countries to take appropriate action to increase availability of essential commodities at service delivery points.

Challenges

- Integrating pharmaceutical, blood, and radiological services within health service delivery networks continues to be a challenge that hinders not only access to services and products but also the response capacity of the first level of care. The lack of proper pharmaceutical services at the first level of care represents a barrier to the organization of services and access to medicines by the population. Moreover, high personnel turnover within countries and territories and lack of qualified workers in radiology, pharmacy, supply chain management, and other areas related to health technologies hinders progress.

- Changes in National Regulatory Authorities following changes of government in many countries across Latin America hinder the long-term process of objectively evaluating regulatory systems. Countries need continuing commitment and engagement to successfully implement the Global Benchmarking Tool and to achieve the status of WHO-listed authorities.

- Pharmacovigilance and post-market surveillance, which are essential regulatory functions, remain underdeveloped in the Region. Member States continue to emphasize market entry and registration over proper surveillance. Brazil, Peru, and other countries of the Region are beginning active pharmacovigilance projects to assess specific adverse reactions associated with groups of medicines. Support will be required to sustain these actions until the systems are more developed.

- Unbiased information, free from conflicts of interest, is necessary for the sound selection, incorporation, prescription, and use of medicines and health technologies. Transparency and accountability in the allocation and use of resources for medicines and other health technologies continues to be key in building more effective and efficient health systems in the Region. The unethical influence of the pharmaceutical industry over prescribers hinders the rational and sustainable use of medicines and health technologies to benefit the health of people in the Americas.

- Supply chain management capacities are critical for timely access to essential medicines. Most Member States have limited capacities to estimate and forecast needs, organize product distribution, and provide oversight of the supply chain, yet not enough attention is paid to this fundamental aspect of the health system. The Medicines and Health Technologies Unit within PASB has renewed its agreement with the Global Fund to improve capacities for HIV medicines, but the focus should be broadened to all essential supplies.

Lessons Learned

- A more integrated approach to policy development is required to ensure access to high-quality medicines and health technologies in Member States, addressing issues of availability, selection, affordability, financing, quality, and use.

- Quality assurance of products available through PAHO Revolving Fund and Strategic Fund represents a critical component of the technical cooperation that the Funds provide to Member States to ensure availability and affordability of quality medicines and vaccines. Quality assurance goes beyond the selection of products to be procured. PAHO is playing an increasingly large role in recommending practices for the handling and use of medicines and vaccines once they reach Member States, to avoid quality deviations or temperature excursions. While PAHO will continue to provide this essential support, countries need to strengthen their capacity to properly manage the supply chain, ensure regulatory oversight of products in the health system, and improve communication between national programs and regulatory authorities.

- The development and adoption of the Strategy and Plan of Action on Donation and Equitable Access to Organ, Tissue, and Cell Transplants 2019-2030, a first in WHO, provides an example of how public health priorities need to contemplate more complex and advanced medical interventions. It also exemplifies a successful approach to developing a regional plan for an area where Member States show extensive asymmetries.

- Subregional approaches backed by political commitment have proven effective in implementing strategies to promote access to medicines and strengthen regulatory capacity by enabling Member States with limited capacity to share resources and by fostering regulatory reliance and work-sharing mechanisms.

- Member States that have been successful in transforming and strengthening their regulatory systems have benefited from political commitment at the highest level of government, beyond the national health authority. They have emphasized management and administrative change within the National Regulatory Authority and a high degree of technical, financial, and administrative autonomy for the NRA in relation to the ministry of health.

Cross-cutting Themes

- As part of an inter-programmatic project to reduce maternal mortality, and in collaboration with Member States (Honduras, Paraguay, and Peru), PAHO implemented a review of blood use protocols in obstetric emergencies, a review of blood service network models, and joint training on obstetrics and transfusion. The results pointed to the need to reorganize the blood services network to reach remote indigenous communities and meet their needs.

- PASB reformulated the emergency medical kits used in disasters to support an improved response, particularly to geographically isolated populations. With the support of the PAHO/WHO Collaborating Center at the National University of La Plata, Argentina, a proposal was developed for a modular kit incorporating essential medicines for use in different emergency scenarios. This approach resulted in smaller kits, saving costs and reducing waste. A group of experts on natural disasters from the Region discussed and agreed on the proposal.

- After a thorough analysis of the Latin American Center for Perinatology, Women and Reproductive Health (CLAP) database of maternal immunization records, a plan was developed to improve data collection and management on vaccination during pregnancy and associated adverse events. Adverse event detection has lagged in post-market surveillance programs and is needed to improve vaccination safety and compliance during pregnancy.

4.4 Health Systems Information and Evidence

Overview

This program area focuses on promoting the generation, availability, analysis, and use of high-quality health information and evidence (including vital and health statistics) by Member States and public health stakeholders. Such data can be collected through health information systems and other information systems that have an impact on health. The program area is complemented by robust research, knowledge management, knowledge translation, and information and communication technologies (ICT). Technical cooperation entails strengthening information systems for health, with an emphasis on vital statistics; providing guidance for data governance and digital health strategies; and promoting the use of data, information, and analyses by multiple stakeholders. PASB encourages Member States to formulate policies based on evidence that is the outcome of strong and ethical research governance and stewardship, and to develop and maintain knowledge management systems to foster and optimize scientific production for public health use. The Organization has well-established mechanisms in place to disseminate timely and relevant evidence for decision making.

Main Achievements

- The coverage and quality of birth and death records has improved across the Region of the Americas. Member States have made concerted efforts to prioritize vital statistics and invest in information systems for health that facilitate the collection of quality data. They have committed to taking a holistic approach to strengthening information systems following approval of the Plan of Action for Strengthening Information Systems for Health 2019-2023. This plan presents a series of targets for improving the data management and governance practices of countries and territories with a view to improving data quality and coverage in order to better inform programmatic decisions and policies. The information systems of 18 countries and territories have undergone assessments using the IS4H maturity assessment tool developed by PASB. Some of this work is supported by the Inter-American Development Bank, which has approved $47 million for investments to strengthen IS4H in the Region. Twenty-five Member States have established national reference centers or inter-institutional committees that manage vital and health statistics using guidelines developed by PASB in coordination with other partners. Over 180,000 doctors from the Region have taken and passed the Virtual Course on Properly Completing Death Certificates, which is available in English, French, and Spanish. More than 700 ICD-10 coders have been trained in International Classification of Diseases (ICD) mortality and morbidity coding through online and in-person courses offered through the Latin American and Caribbean Network to Strengthen Health Information Systems (RELACSIS). This network has fostered triangular and South-South technical cooperation, with financial support from USAID and significant technical input from the governments of Argentina and Mexico. Both countries have expertise in improving the quality and coverage of birth and death statistics, and personnel from their government agencies contribute training time and materials.

- Within the Region, progress was reported in executing implementation plans, policies, and programs on knowledge management (KM) and communication technologies. Thirteen countries and territories are on track in implementing the Strategy and Plan of Action on Knowledge Management and Communications, particularly concerning the need to have public health policies in place that address information access, KM, or health communication. Member States have taken steps to foster scientific production through capacity building; Brazil, Argentina, and Colombia continue to lead among the 881 journals indexed in the Latin American and Caribbean Health Sciences Literature (LILACS) database as of end 2019. PASB has facilitated initiatives to produce, record, classify, and circulate scientific and technical knowledge in the Region, many promoted through the Virtual Health Library.

- Following publication of the 2018 report Bioethics: Towards the Integration of Ethics in Health, PASB developed research ethics objectives and indicators along with a strategy to advance them. The progress made on regional research ethics led to a Wellcome Trust grant to scale up impact in this area and was featured in the Lancet

Global Health.[2] Ongoing technical cooperation by PASB in key areas of public health ethics is having health impact; for example, an ethics consultation to assess the use of an intervention to treat tungiasis triggered significant health outcomes. The Organization's work to integrate ethics in public health included the development of tools for global use (e.g., on ethical surveillance of noncommunicable diseases). As a result, PAHO is exercising leadership in proactively using ethics to guide public health decision making; an example is the upcoming ethics consultation on poliovirus vaccine.

- Member States have made concerted efforts to institutionalize the use of problem-focused and action-oriented scientific evidence and research in formulating policies and programs. Fourteen countries have strengthened their capacity to institutionalize evidence-informed decision-making mechanisms. More than 900 policymakers, policy implementers, and researchers from across the Region have received capacity building in evidence generation and use for policy and practice through virtual courses (Virtual Campus for Public Health), workshops, and other activities. Through the iPIER program (Improving Program Implementation through Embedded Research), 13 health programs in 12 countries have strengthened their capacity to institutionalize the use of scientific evidence for the improvement of program, service, and policy implementation. Experiences and lessons learned were documented in an article published in Health Research Policy and Systems.[3] Seven Member States have developed and implemented laws, regulations, norms, and standards pertaining to research, and 10 countries have taken steps to institutionalize rapid response mechanisms for decision making with support from EVIPNet (Evidence Informed Policy Networks). Seven Member States have strengthened their capacity to develop mechanisms to set and implement health/research priorities and policies. A subregional research agenda is available for chronic kidney disease of non-traditional causes (CKD) in Central America,[4] as well as three standardized protocols, a systematic review on causes of the disease,[5] and evidence needed for diagnosis and treatment of CKD in primary care.

Challenges

- Despite significant advances in the quality and coverage of health data, weaknesses in information systems for health in many countries have led to gaps that have an impact on the targeting of health resources. Information systems in many Member States vary in terms of coverage and quality, with weaknesses particularly noted in areas with significant inequalities and vulnerable populations. The IS4H maturity assessments have shown there is room for adopting ICT solutions to optimize data management. Where strategies do exist, they are not always aligned with e-government initiatives. Countries often lack a standardized data architecture, have inconsistent standards, or apply different data management policies at different levels of the health system. Future

[2] Neil M, Saenz C. Advancing research ethics systems in Latin America and the Caribbean: a path for other LMICs? https://www.thelancet.com/pdfs/journals/langlo/PIIS2214-109X(19)30441-3.pdf

[3] Langlois E, Mancuso A, Elias V, Reveiz L. Embedding implementation research to enhance health policy and systems: a multi-country analysis from ten settings in Latin America and the Caribbean. Health Research Policy and Systems 2019;17:85. https://doi.org/10.1186/s12961-019-0484-4

[4] Reveiz L, Pinzón-Flórez C, Glujovsky D, Elias V, Ordunez P. Establishing research priorities for chronic kidney disease of non-traditional causes in Central America. Rev Panam Salud Publica 2018;42:e13. https://pubmed.ncbi.nlm.nih.gov/31093042/

[5] Chapman E, Haby M, Illanes E, Sanchez-Viamonte J, Elias V, Reveiz L. Risk factors for chronic kidney disease of non-traditional causes: a systematic review. Rev Panam Salud Publica 2019;43:e35. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6461065/

investments in these areas should take a system-wide approach to prevent the creation of siloed information systems that are disconnected from or incompatible with Member States' primary information systems for capturing data for public health action.

- The Region will need to ensure that plans are in place to prepare for the transition from ICD-10 to ICD-11. This will entail capacity building for individuals specialized in ICD coding, including personnel in national statistics offices and ministries of health. This will be essential to facilitate the continued comparability of health data collected from the Americas. This process may take several years and will require significant investments.

- Health analysis is a crucial function of the health sector, intended to ensure that policy and programs are evidence-based. The Region must continue to invest effort and resources to establish and strengthen capacities for health analytics and epidemiology, building on efforts made to produce the country chapters published in Health in the Americas+, 2017 edition. An assessment of health situation analyses produced by countries in the Region demonstrates several challenges. Most reports routinely include demographic information, socioeconomic data, and historical context, as well as descriptive information on health systems. Risk factors (particularly those contributing to morbidity and mortality) are well documented, as are health inequalities between states or departments within countries. Nevertheless, Member States should seek to build capacities to conduct analyses based on disaggregated data, down to the municipal level where feasible. Critically, these reports should inform the prioritization of health issues and serve as the basis for policies and programs (which should be documented in the reports). Member States are also encouraged to disseminate the findings among civil society and stakeholders so they can address key health issues in a holistic manner.

- Health information is increasingly accessible to wider audiences as a result of ICTs and other digital innovations. Nevertheless, financial constraints continue to hamper countries' efforts to ensure that scientific production and health-related knowledge is available to health actors. Member States should continue to consider tools and platforms made available by PASB and WHO to foster a knowledge-sharing and learning environment in the Region in the spirit of Pan Americanism. Investments in ICT infrastructure are similarly important to reduce access barriers to health-related knowledge, particularly for people in remote areas.
- Frequent staff turnover within ministries of health hinders efforts to foster an evidence-based approach to programmatic designs. Continuous capacity building should be complemented by steps within Member States to institutionalize mechanisms for building and utilizing evidence and research.

Lessons Learned

- The IS4H initiative and the RELACSIS network have demonstrated the value in facilitating Member States' and partners' use of networks to foster South-South and triangular technical cooperation. This approach reduces costs, builds solidarity, and promotes sharing of successful practices developed in Latin America and the Caribbean. Regional networks are similarly complemented by interagency collaboration, particularly among the Economic Commission for Latin America and the Caribbean (ECLAC), the United Nations Population Fund (UNFPA), WHO, and the World Bank, to address vital and health statistics through a holistic approach. This collaboration has worked for birth and death records, which are managed by actors outside the health sector. Strategic partnership facilitates the consolidation of scalable and lasting solutions.

- The monitoring and evaluation of policies and agendas on research for health is resource-intensive and susceptible to partial automation using artificial intelligence. It is possible to have timely, accurate information made available to countries, and to monitor and assess progress. Member States should assess such investments, with consideration of costs and in-country capacity.

- There is a need to define good practices and standards to assist the development and updating of national policies and agendas to support research on health-seeking behavior in alignment with regional and global policy documents, the greater goals of the 2030 Agenda for Sustainable Development, and universal health.

- Institutional capacity development on the use of data and evidence for decision making requires time to show results. Therefore, it is important for Member States to persevere with sustainable actions to allow for the essential outcomes to mature.

- Member States increasingly recognize the need to set targets for SDG 3 indicators. This is a step beyond previous measures that have focused on calculating health inequalities disaggregated to the subnational level. Country experiences with establishing targets have shown that this should be an inclusive process involving multiple stakeholders in order to build consensus and solidarity for the interventions needed to address identified health inequalities.

Cross-cutting Themes

- The PASB-promoted standards for research reporting have contributed to efficiencies, increasing the value of research for public health and reducing research waste. PASB has also supported the development of standards for reporting equity in health research. Member States are increasingly aware that these research agendas can effectively ensure that research leads to applicable solutions for health if they are linked to sectoral funds and grants. Many of the health research agendas are managed by the science and technology sector.

- PASB ensures that existing data and evidence are factored into health equity analyses that can serve as a basis for strategies to address health program implementation issues. This reinvigorated practice aims to ensure that programs are designed to target critical populations and areas that would otherwise not receive resources. Member States are similarly investing in information systems for the health sector to capture data on the total population, including people in vulnerable situations, for whom data are not always collected. These measures contribute to ensuring that no one is left behind.

4.5 Human Resources for Health

Overview

This program area focuses on enabling Member States to develop and implement human resources for health (HRH) policies, plans, and educational strategies to advance toward universal access to health and universal health coverage. This involves actions to ensure that personnel with the necessary competencies and quality are available to health systems and services. PASB technical cooperation aligns with the analysis of countries' demands and is based on periodic consultations to examine and assess the current situation of HRH and define future priorities for the Region.

Main Achievements

The Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018-2023 was presented and adopted by the 56th Directing Council, following completion of three subregional consultations and extensive country consultations. Twenty-seven countries and territories identified priorities, objectives, and indicators to measure their progress in areas of policy development, capacity development, and intersectoral coordination between labor, health, and education (Antigua and Barbuda, Argentina, Bahamas, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, Suriname, Trinidad and Tobago, Turks and Caicos, Uruguay, Venezuela). Also, during 2019, with the partnership of the Andalusian School of Public Health, evaluation experts and ministry of

health officials from the countries prepared a manual for use in monitoring the HRH plan of action. To support the generation of information for health workforce planning, a regional workshop was organized in October 2018 on National Health Workforce Accounts (NHWA), with the participation of 30 countries.

- The findings of the 26-country regional study on the migration of nurses in the Caribbean highlighted challenges concerning the retention of the health workforce within health systems – in particular, the retention of specialized nurses. It also made clear the need to develop adequate HRH information systems and health workforce planning and to create and implement policies to promote health workforce retention and circular mobility. To inform preparation of the State of the World's Nursing Report 2020, 35 countries uploaded data on 36 indicators in the National Health Workforce Accounts and started or improved their own health information systems for HRH. In 2019, PAHO trained all the NHWA focal points and the chief nursing officers from 37 countries in two subregional workshops. This initiative is generating improvements in data generation and management and workforce planning in countries. During 2018-2019, 27 countries in the Region advanced toward an HRH action plan or strategy aligned with policies for universal access to health and universal health coverage. A regional initiative, Strategic Directions for Nursing in the Region of the Americas, presented proposals for dealing with complex nursing issues related to governance and leadership, working conditions and capacities, and quality of nursing education to respond to the needs of health systems focused on universal access to health, universal health coverage, and the SDGs.

- The health and education sectors are working together through inter-professional education and collaborative practice in 19 countries (Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Guatemala, Guyana, Honduras, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, Venezuela). The Indicators for Social Accountability Tool (ISAT) is being utilized to monitor the advance of social mission in health professions education in the Region. It was made available in English, Spanish, and Portuguese in 2019 with a view to improving the production and availability of HRH in rural and underserved areas and to strengthen the development of inter-professional health teams, in particular at the first level of care.

- Member States adopted Resolution CD57.R15, Expanded Textbook and Instructional Materials Program (PALTEX), following an analysis of changing trends in education and in the supply of learning resources in the Region. Based on this multi-year analysis, the 57th Directing Council found that education trends and training requirements for health professionals in the Americas had evolved considerably in recent years, and that PALTEX had fulfilled its mandate to provide textbooks and instructional materials for the training of health workers in the Region, as initially proposed in 1966. The Directing Council requested the Director of PASB to terminate PALTEX operations, including administrative, financial, and human resource matters, by 31 December 2019.

- In order to support actions to reduce maternal mortality in the Americas, capacity building was provided to HRH. This included the training of tutors who in turn trained 3,749 health personnel in five countries, namely Bolivia, Colombia, Ecuador, Nicaragua, and Peru, as well as in the cross-border Chaco area. A total of 42 countries have continuing education strategies and programs for health personnel oriented toward public health and clinical management areas through the Virtual Campus for Public Health or equivalent e-learning networks.

- The Virtual Campus for Public Health (VCPH) continues to grow, reaching a total of 1,040,000 participants in courses, with 87 self-learning courses available. In 2019, a total of 18 courses with tutoring were offered at the regional level with over 700 participants completing them. The countries with the most users, in descending order, are Mexico, Ecuador, Colombia, Argentina, Peru, Chile, and Honduras. Priority countries such as Bolivia, Nicaragua, and Honduras have included new courses in their respective country nodes. At the subregional level, one of the highlights is the Primary Health Care course for Central America, while in the Caribbean node, there are more than 6,100 enrollments in VCPH courses.

Challenges

- Persistence of inequity at all levels, reduced retention rates in rural and neglected areas, precarious working conditions, suboptimal productivity, and poor performance are some of the challenges that countries are facing. Those elements hinder the progressive expansion of services, particularly at the primary care level. Also, even when human resources for health are in place, they often lack the proper profile and technical and cultural competencies, impacting the capacity of health services in the communities they serve.

- Intersectoral coordination in the areas of governance, regulation, and management is critical to the achievement of universal health. Attempts to promote intersectoral cooperation are often limited by the differing goals and legal frameworks of the health sector, the education sector, the labor sector, and the financial sector. Professional practice is fragmented, and this makes it difficult to establish inter-professional teams with the competencies required for integrated health networks.

- Funding for HRH continues to be highly variable within the Region. In many countries, it is insufficient to ensure the delivery of quality health services, particularly at the first level of care, and to meet the needs of underserved populations. Evidence has shown that investing in human resources for health improves overall employment rates and enhances economic development. There is an urgent need to strengthen political will and translate commitments into adequate budget allocations for HRH.

- Low wages, poor working conditions, and lack of career advancement opportunities undermine the motivation of health workers and, in many countries, lead to outmigration. To improve the quality of the health workforce and promote retention, Member States must continue efforts to create stable jobs, enforce adequate hiring conditions (for both permanent and temporary contracts), and guarantee social protection to health workers.

- Within the Region, education in the health sciences has grown exponentially in the past few decades. However, the dominant programmatic/curricular vision and its processes continue to foster a purely biomedical model. The main component of the regulation of this system, namely the accreditation of health professional educational institutions, promotes overspecialization, and there are concerns about the relevance of many academic programs and the quality of training, with consequences for professional practice. Many countries are experiencing difficulties in moving toward skills-based training, establishing inter-professional learning programs, designing flexible curricula, strengthening teaching capacity, and extending training to all levels of the care network.

Lessons Learned

- Effective governance and regulation are critical for developing an HRH-related strategic policy and for designing, funding, and implementing a national HRH plan. Effective intersectoral coordination, high-level involvement, and strategic positioning of HRH issues are needed to spearhead a public sector commitment to HRH reform.

- If the growing private health sector is to be adequately involved in the pursuit of strategic policies for HRH, the sector's active participation in the stakeholder coordination process must be encouraged, and the regulatory capacity of national authorities will require strengthening.

- More efforts are required to develop HRH information systems and to institutionalize a framework for shared accountability concerning the analysis and use of the data. This information has been critical for the development of national policies and plans.

- Analysis of the health needs of the population should be combined with labor market, gender, and fiscal space analyses to guide the development of HRH policy options, strategies, and financing reforms.

Cross-cutting Themes

- Recognizing that health workers are at the heart of the Region's health systems, the Strategy on Human Resources for Universal Access to Health and Universal Health Coverage provided Member States with a comprehensive analysis and lines of action on HRH issues, including human rights, the social determinants of health, gender equity, ethnic groups, and migrant populations. This information will be of strategic value to decision makers working to formulate HRH policies that benefit the people the Americas in the coming years.

- Gender equality was mainstreamed into the HRH strategy as a cross-cutting goal, calling for gender-transformative investments and actions to build the health workforce. These include efforts to ensure that women are appropriately represented in social dialogue mechanisms; to strengthen and use sex-disaggregated data; to undertake gender analysis as an integral part of labor market analysis; and to develop and strengthen national health workforce strategies, policies, and investments that address identified gender biases and inequalities, including gender-sensitive considerations regarding women's security, working conditions, and mobility.

- Strategic workforce planning needs to proceed based on a Strategic Workforce Planning Maturity Assessment model that includes the cross-cutting themes. This requires countries to think about their health needs, how the workforce is meeting these needs today, how these needs might change in the future, the design of a health system to meet current and future needs, and the challenges this would present. This strategic planning requires a focus on the best way to meet future population health needs – with the resources available – rather than just looking at workforce numbers and population ratios.

Budget Implementation

Table 2. Category 4 Budget Implementation Summary
(US$ millions)

Program area	Approved PB 18-19	Available for implementation	Implementation	Available for implementation as % of approved PB	Implemented as % of approved PB	Implemented as % of available for implementation
4.1 Health governance and financing; national health policies, strategies, and plans	19,300,000	20,385,485	20,302,529	106%	105%	100%
4.2 People-centered, integrated, quality health services	17,300,000	12,394,012	12,360,617	72%	71%	100%

4.3 Access to medical products and strengthening of regulatory capacity	28,400,000	23,509,509	23,062,194	83%	81%	98%
4.4 Health systems information and evidence	35,400,000	26,162,090	25,914,240	74%	73%	99%
4.5 Human resources for health	18,000,000	8,994,519	8,894,766	50%	49%	99%
TOTAL	**118,400,000**	**91,445,615**	**90,534,345**	**77%**	**76%**	**99%**

Budget Implementation Analysis

- The total approved budget for Category 4 was $118.4 million, which was the highest of the technical program areas and represented 19% of the total approved budget for base programs ($619.6 million). Of this approved amount, 77% was funded ($91.4 million). The funding gap between available funds and approved budget was 23% ($27 million). Implementation followed levels of financing; of funds available, 99% ($90.5 million) was implemented.

- Funds available for Program Areas 4.1 (106%) and 4.3 (83%) are higher than for the other program areas, reflecting the level of priority that countries give to these two program areas. Four of the five program areas in Category 4 were designated as high priorities for the Region (Program Areas 4.1, 4.2, 4.4, and 4.5). Despite this, Program Areas 4.2 and 4.4 had just 72% and 74% of their funding available during the biennium.

- Even though funds available for Program Area 4.5, Human Resources for Health, remain on average lower than for the other program areas, the WHO budget and strategic actions in HRH are integrated within PAHO Program Area 4.1, which partly accounts for the lower availability of funds in Program Area 4.5 (50%) and simultaneously higher availability in Program Area 4.1 (106%).

- Implementation against available funds is on average 99% in Category 4, in line with performance in other categories. Not all funds distributed in 2018-2019 expired at the end of the biennium, and balances can be carried over to 2020-2021.

- The rate of implementation of the program of work slowed considerably in the final quarter of the biennium due to institutional restrictions on the utilization of resources and the need to ensure constant oversight and revision of resource availability and prioritization of activities against instructions received for the utilization of resources.

Resource Mobilization

- Major efforts have been made to ensure continued and increased resource mobilization from traditional and new donors such as Gavi, USAID, Global Affairs Canada, Korea International Cooperation Agency, Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, United States Food and Drug Administration, Brazil, Japan, Luxembourg, the Bill & Melinda Gates Foundation, UNFPA, and the United Nations Development Programme, among others.

- The category performed strongly in resource mobilization during the biennium. Significant funds were mobilized for countries through Gavi and the Universal Health Coverage Partnership (UHC Partnership), both of which have

a regional and a country component. Examples of resources mobilized include *a)* $13 million from the UHC Partnership (for execution during 2019-2023), with approximately 50% of funding being utilized to support 20 countries throughout the Region in health systems transformation toward universal health; *b)* a $4 million grant for expansion of the model of care in Haiti; and *c)* $16.9 million for projects in six Gavi counties (excluding funding for the procurement of vaccines). In addition, the technical area of medicines and health technologies mobilized approximately $4.7 million from multiple donors to support regulatory systems strengthening, access to medicines, and pharmaceutical supply systems strengthening, among other objectives.

Recommendations

- Continue high-level advocacy in countries to support health systems transformations and the progressive achievement of universal access to health and universal health coverage, in line with the goals of the PAHO Strategic Plan 2020-2025: "Equity at the Heart of Health." Communication at the highest level of states is required to continue to inform countries on universal health, specifically with respect to the commitments of the Political Declaration of the UN High-Level Meeting on Universal Health Coverage (2019); regional and global mandates on universal health, primary health care, and health promotion; recommendations of the report of the PAHO High-Level Commission on Universal Health in the 21st Century: 40 Years of Alma-Ata; and the report of the PAHO Commission on Equity and Health Inequalities in the Americas. PASB remains well positioned to provide countries with the necessary technical, legal, and strategic support for health sector reform processes, aligned with global and regional mandates.
- Continue to expand political and technical partnerships and embrace innovative approaches to technical cooperation in order to achieve lasting health systems transformation.
- Strengthen primary health care approaches through deeper integration with the community and the incorporation of healthy settings (e.g., schools, urban areas, workplaces) and health promotion at the heart of the primary health care strategy.
- Liaise with WHO and the United Nations through high-level dialogue on the monitoring of health-related SDG 3, especially with respect to areas related to Category 4 (universal health care, primary health care, essential public health functions, access to medicines, health information, research, and health workforce). Conceptual frameworks, core data sets, methodologies for collection, aggregated indices, and modeling constitute some of the challenges that both PASB and PAHO Member States will face in the process of developing and reporting indicators. Communication with Member States on global processes in relation to regional initiatives continues to require particular attention. Another priority is capacity development at the national level in digital transformation for health and in the continued development of information systems for health.
- Continue to prioritize all program areas under Category 4, recognizing that health systems constitute the platform for delivery of all health services required to improve the health and well-being of the peoples of the Americas. The development and expansion of resilient and well-resourced health systems is crucial to ensure the consolidation of health gains, curb disease outbreaks, and advance health protection and promotion. Capacity building within PASB with respect to health systems constitutes a priority at the leadership and technical levels and in particular within the PAHO/WHO Representative Offices, as the entities with direct responsibility for the in-country delivery of technical cooperation.

Detailed Assessment by Program Area

Program Area 4.1: Health Governance and Financing; National Health Policies, Strategies, and Plans **OUTCOME: Increased national capacity for achieving universal access to health and universal health coverage** OCM Indicator Assessment: 0/2 achieved, 2/2 partially achieved OPT Indicator Assessment: 2/5 achieved, 3/5 partially achieved	**Rating: Met expectations**

Assessment of outcome indicators

OCM #	OCM Indicator Text	Baseline 2013	Target 2019	Assessment Rating
4.1.1	Number of countries and territories that have implemented actions toward the progressive realization of universal access to health and universal health coverage	3 (2015)	12	Partially achieved
Ten countries and territories achieved the indicator as of 2019. Two countries partially achieved the indicator and are making progress toward achievement. Overall, there is significant progress toward achievement of this indicator, but it is heterogeneous across the Region. Some countries have taken actions to respond specifically to the needs of populations in conditions of vulnerability and social exclusion, while other countries have deepened processes to reform their health systems in a more structural way.				
4.1.2	Number of countries and territories with public expenditure in health of at least 6% of Gross Domestic Product (GDP)	7	20	Partially achieved
Nine countries and territories achieved the indicator as of 2017 (the latest data year available in the WHO GHED database).[6] Four countries and territories partially achieved the indicator and are making progress toward achievement. No progress was made in seven countries.				

[6] The data for the official indicator are from the WHO GHED Database 2019, which has data for countries until 2017, so there is a two-year time lag in reporting on indicators in 2019.

While countries are taking steps to increase public spending on health, progress is still slow. As a consequence, the decline in out-of-pocket health spending is also slow. Therefore, it is still important to continue efforts in the Region to eliminate economic barriers to access and reduce risks that families will fall into financial catastrophe and impoverishment due to health events. To move forward, we must explore all sources of available fiscal space, and also consider strong support for the first level of care and developing health systems around the primary health care strategy.

Advocacy needs to be further strengthened in several countries that have developed strategies to increase public expenditure in health.

Assessment of output indicators

OPT #	OPT Title	OPT Indicator Text	Baseline 2017	Target 2019	Assessment Rating
4.1.1	Countries enabled to develop comprehensive national health policies, strategies, and/or plans, including for universal access to health and universal health coverage	Number of countries and territories that have a national health sector plan or strategy with defined goals/targets revised within the last five years	18	33	Partially achieved
Twenty-four countries and territories achieved the indicator. Significant progress has been made in terms of countries having plans and strategies with defined objectives that are periodically reviewed. The most relevant differences between countries have to do with the nature of the strategies and the level of participation of different actors. While in some cases countries have promoted changes in the organization of health services, in other cases they have focused on reforms of the financing mechanisms to improve coverage.					
4.1.2	Countries enabled to develop and implement financial strategies for universal access to health and universal health coverage	Number of countries and territories that have financial strategies for universal access to health and universal health coverage	12	18	Partially achieved
Sixteen countries achieved the indicator. Two countries partially achieved the indicator. More countries have been able to formulate financing strategies for universal health.					
4.1.3	Countries enabled to develop and implement legislative and regulatory frameworks for universal access to health and universal health coverage	Number of countries and territories that have legislative or regulatory frameworks to support universal access to health and universal health coverage	18	23	Achieved
Twenty-three countries and territories achieved the indicator.					

The 18 baseline countries that achieved the indicator in previous years all met the requirement of having at least one law in support of universal health. Several proposals have been made to revise the indicator to let Member States align their health-related laws and regulations with the evolution of the health system, in accordance with the lines of action set forth in the Strategy on Health-Related Law, approved by PAHO Governing Bodies in September 2015. With this in mind, Member States should review, update, and strengthen their existing legislation to harmonize it with the most recent international mandates and recommendations and with the rights-based perspective, recognizing health as a human right and also as a constitutional primary right in many Member States. With a time frame for that review of at least five years, Member States will have the opportunity to provide stable and strong support to their health systems, focusing on a people-centered primary care system that can address the social determinants of health.

All six of the 2019 target countries enacted at least one law linked with the universal health strategy, so they achieved the indicator. Health-related laws are normative and mandatory rules that apply to all people in a country and relate to three areas of legal protection and coverage: *a)* people's rights regarding access to health care, the means by which they can exercise those rights, and, in case of default, the means by which they can obtain remedies, ensuring fulfillment of the human right to health and universal health; *b)* the duties of government in the fulfillment and guarantee of those rights, including the capacity, funding, and powers of the national health authorities; and *c)* the organization of the health system, including the functions and duties of its institutions. This is why the review and strengthening of health-related laws is so important in the shaping of health systems that emphasize people-centered primary care and also address the social determinants. When laws are duly enacted and implemented, access to health and health coverage can go from words to action, including protection by legal means, with a view to achieving health as a human right for all. Laws can also provide a vision of change and help to promote that change.

4.1.4	Countries enabled to monitor and evaluate health systems and service indicators related to universal access to health and universal health coverage	Number of countries and territories that have analyzed and reported progress toward universal access to health and universal health coverage using the framework for monitoring and evaluation	7	14	Achieved

Fourteen countries achieved the indicator.

These countries reported information in 2019 on the health of their populations and emerging health concerns, as well as on socioeconomic factors impacting the population's health and use of health care services. These analyses enabled countries to measure progress toward at least two of the four strategic lines of the strategy on universal health.

PAHO directly supported application of the monitoring framework for universal health to guide assessments; it also enabled countries to produce their own quality estimates and expand their capacity to produce broader health spending and financial protection statistics. In addition, PAHO continued to support regional monitoring of key indicators for universal health goals in 2019, including baseline assessment of equity in access barriers across Member States. Partial results were included in a peer-reviewed paper.[7]

[7] Houghton N, Bascolo E, del Riego A. Socioeconomic inequalities in access barriers to seeking health services in four Latin American countries. Rev Panam Salud Publica 2020;44:e11. https://doi.org/10.26633/RPSP.2020.11

While the application of the monitoring framework has been useful in helping to identify areas suitable for policy intervention in the countries supported, political contexts coupled with the weak stewardship role of national health authorities hinder the formulation and implementation of policy options for making progress toward universal health.

Availability of data and the state of information systems, combined with limited capacity for monitoring health policies and reform processes in countries, presents an ongoing challenge. Accordingly, technical cooperation is geared toward building capacity so that countries will be able to carry out this function on their own. For those countries that collect information on a regular basis, there is still the need to articulate monitoring efforts with the policy-making process.

4.1.5	Countries enabled to develop and implement HRH policies and/or plans and health workforce strategies to achieve universal access to health and universal health coverage	Number of countries and territories with an HRH action plan or strategy aligned with policies for universal access to health and universal health coverage	6	27	Partially achieved

Five of the six baseline countries and ten of the 21 target countries developed HRH policies and plans or workforce strategies and are therefore assessed as having achieved the indicator. Seven countries partially achieved the indicator.

Member States were enabled to achieve this output through regional dialogues on the future of human resources for health within the context of universal health and the future needs of health systems. The dialogue defined the Strategy on Human Resources for Universal Access to Health and Universal Health Coverage (CSP29/10), approved in September 2017 at the 29th Pan American Sanitary Conference. Further consultations with Member States in 2018 resulted in the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018-2023, also approved by Member States, which revealed the need for the selected indicators to reflect each country's specific context, priorities, and diversity. During the development of the indicators for this plan of action, the participating countries described the attributes of HRH policies aligned with the goal of achieving universal health.

Program Area 4.2: People-Centered, Integrated, Quality Health Services **OUTCOME: Increased access to people-centered, integrated, quality health services** OCM Indicator Assessment: 1/1 partially achieved OPT Indicator Assessment: 1/2 achieved, 1/2 partially achieved	**Rating: Partially met expectations**

Assessment of outcome indicators

OCM #	OCM Indicator Text	Baseline 2013	Target 2019	Assessment Rating
4.2.1	Number of countries that have reduced by at least 10% hospitalizations for ambulatory care sensitive conditions	6 (2015)	19	Partially achieved
Fourteen target countries and territories achieved the indicator. One target country partially achieved the indicator. More effort is needed, as the information in the countries is not structured in such a way as to allow construction of the indicator. To facilitate this in the 2020-2021 biennium, PASB has developed an online calculation tool and is working on a methodological guide for countries.				

Assessment of output indicators

OPT #	OPT Title	OPT Indicator Text	Baseline 2017	Target 2019	Assessment Rating
4.2.1	Policy options, tools, and technical guidance provided to countries to enhance equitable, people-centered, integrated service delivery and strengthening of public health approaches	Number of countries and territories implementing Integrated Health Service Delivery Networks (IHSDNs)	19	28	Partially achieved
Twenty-four countries and territories achieved the indicator. Two countries partially achieved the indicator. Countries that achieved the indicator developed their national capacities for implementation of the IHSDN framework with a focus on strengthening the resolution capacity of the first level of care. They did so through new legal frameworks, road maps, or policies that support the redefinition and reconfiguration of services in municipal, departmental, or national networks. In addition, human resources training was provided through the online virtual course on IHSDNs.					
4.2.2	Countries enabled to improve quality of care and patient safety in accordance with PAHO/WHO guidelines	Number of countries and territories implementing national strategies and/or plans for quality of care and patient safety	13	24	Achieved
Twenty-two countries and territories achieved the indicator. One country partially achieved the indicator.					

PAHO Member States approved the Strategy and Plan of Action to Improve Quality of Care in Health Service Delivery 2020-2025 (CD57/12) during the 57th Directing Council. The strong support received for this strategy and plan of action implies a significant achievement and a political commitment to prioritize this agenda.

Program Area 4.3: Access to Medical Products and Strengthening of Regulatory Capacity **OUTCOME: Improved access to and rational use of safe, effective, and quality medicines, medical products, and health technologies** OCM Indicator Assessment: 2/2 partially achieved OPT Indicator Assessment: 2/4 achieved, 2/4 partially achieved	**Rating: Met expectations**

Assessment of outcome indicators

OCM #	OCM Indicator Text	Baseline 2013	Target 2019	Assessment Rating
4.3.1	Number of countries that ensure access to medicines included in the national essential medicines list without any payment at the point of care/service/dispensing of the medicine	1	14	Partially achieved
One baseline country and one additional target country achieved the indicator. Eleven countries partially achieved the indicator. PAHO has contributed to improving access to quality medicines in Member States through the regional program of work in medicines. Countries receive support in developing pharmaceutical policies that promote principles of equitable access, and in use of tools to measure policy performance.				
4.3.2	Number of countries and territories that have achieved or increased their regulatory capacity with a view to achieving the status of functional regulatory authority of medicines and other health technologies	7	35	Partially achieved
Six baseline countries and nine target countries achieved the indicator. Five countries and territories partially achieved the indicator. Many of the countries where progress has not been reported have experienced changes at governmental and institutional levels. Despite continuing technical and financial support during the past five years, changes in National Regulatory Authorities hinder the long-term process and continuing commitment and engagement required for countries to successfully implement plans and tools to achieve the indicator. Some Central American countries have made progress in defining institutional development plans for strengthening medicines regulatory capacity. The Caribbean Regulatory System continues to have a positive impact in all Caribbean countries, improving access to quality-assured medicines and products. The Caribbean countries have made progress on radiation safety by drafting national legislation and establishing regulatory authorities/bodies. They have also advanced in adopting and/or adapting the requirements of the International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources. Fourteen countries took part in South-South cooperation to strengthen capacities for regulation of medicines and other health technologies as part of the project Cooperation among Countries for Health Development (CCHD).			

Twenty-four countries are members of the Regional Working Group for the Regulation of Medical Devices, which aims to strengthen the regulatory capacity for medical devices in the Region.

Assessment of output indicators

OPT #	OPT Title	OPT Indicator Text	Baseline 2017	Target 2019	Assessment Rating
4.3.1	Countries enabled to develop/update, implement, monitor, and evaluate national policies for better access to medicines and other health technologies	Number of countries and territories with national policies on access, quality, and use of medicines and other health technologies updated within the last five years	11	17	Partially achieved
The 11 baseline countries and two more target countries and territories achieved the indicator. Two countries partially achieved the indicator, as they have drafted pharmaceutical policies.					
4.3.2	Implementation of the Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property	Number of countries and territories reporting access and innovation indicators through the PAHO Regional Platform on Access and Innovation for Health Technologies (PRAIS) Observatory	12	16	Achieved
Twelve baseline countries and four target countries achieved the indicator. Countries have been reporting through PRAIS. They have been developing actions that strengthen the capacity for governance and management of health technologies, including improvement of supply and access, through the application of pricing policies. However, despite the progress, it is necessary to continue advancing the lines set out in the Global Strategy and Plan of Action on Public Health, Innovation and Intellectual Property through specific and viable measures to promote research and development and access to medicines.					
4.3.3	Countries enabled to assess their national regulatory capacity for medicines and other health technologies	Number of countries and territories that have conducted an assessment of their regulatory functions for at least three of the following: medicines, medical devices, radiation safety, blood safety, and organ transplantations	12	19	Achieved
Twelve baseline countries and territories and five target countries achieved the indicator. Strengthening of regulatory capacities for medicines, including vaccines, was supported throughout the assessment of regulatory capacities by using different strategies that included raising awareness of the assessment tools and processes and pre-assessment processes. PAHO has supported the active participation of National Regulatory Authorities of Regional Reference in the process of developing the Global Benchmarking Tool (GBT). Member States in 2019 endorsed and adopted the GBT, which is available in English,					

Spanish, and French. Self-assessments of regulatory capacities were completed in 2019 by Bolivia, Costa Rica, and Paraguay, and a joint assessment was performed by PAHO and WHO in El Salvador and Peru. Haiti was assessed in 2017 using the PAHO abbreviated tool.

Strengthening of regulatory capacities for medical devices was driven by the Regional Working Group for the Regulation of Medical Devices, now consisting of 24 countries, the latest addition being Guyana. The mapping of medical device regulation was completed in five countries as part of the project for the exchange of medical devices inspection reports among NRAs, which was coordinated by ANVISA, the regulatory agency in Brazil. The REDMA Program (Exchange of Reports on Adverse Events of Medical Devices) was launched in March 2019; the program is fully integrated within the Regional Platform on Access and Innovation for Health Technologies (PRAIS) and currently has the participation of 14 NRAs. Seventeen adverse events reports were exchanged throughout the REDMA Program. Three additional countries participated in the mapping of the regulation of medical devices in the Americas Region, with previous participation from 18 countries.

As part of the Plan of Action for Universal Access to Safe Blood 2014-2019, countries assess the supply of blood for transfusion and present indicators on the availability, safety, and use of blood and blood components, and on the organization of the national blood systems. The final report for 2016-2017 on the blood supply of Latin America and Caribbean countries is finished. The final review and presentation to the PAHO Governing Bodies of the Strategy and Plan of Action on Donation and Equitable Access to Organ, Tissue, and Cell Transplants 2019-2030 was approved under Resolution CD57/11.

4.3.4	Countries enabled to implement processes and mechanisms for health technologies assessment, incorporation, and management, and for rational use of medicines and other health technologies	Number of countries and territories with mechanisms for health technologies assessment and evidence-based incorporation, selection, management, and rational use of medicines and other health technologies	12	19	Partially achieved

Twelve baseline countries and territories and two target countries achieved the indicator. Four countries partially achieved the indicator. Countries continue to work to establish a functional mechanism for evaluation and incorporation of medicines and health technologies.

The Regional Base of Health Technology Assessment Reports (BRISA) reached more than 1,500 reports by the end of 2019, produced by the members of the Health Technology Assessment Network of the Americas (RedETSA). With this tool, a pioneer in the Americas, PAHO and RedETSA seek to promote the use of health technology assessment (HTA) to improve the decision-making process for incorporating technologies into health systems. An institutional video was developed to increase utilization of the tool. Several capacity-building activities on HTA were developed, including one course in cooperation with the Argentinean HTA network, which drew the participation of 36 professionals from seven countries. Representatives from six countries benefited from postgraduate scholarships in HTA. RedETSA currently includes 34 institutions from 17 countries, with the incorporation of Bermuda in 2019.

Program Area 4.4: Health Systems Information and Evidence **OUTCOME: All countries have functioning health information and health research systems** OCM Indicator Assessment: 0/2 achieved, 2/2 partially achieved OPT Indicator Assessment: 3/7 achieved, 4/7 partially achieved	**Rating: Partially met expectations**

Assessment of outcome indicators

OCM #	OCM Indicator Text	Baseline 2013	Target 2019	Assessment Rating
4.4.1	Number of countries and territories meeting the coverage and quality goals of the PAHO Regional Action Plan for Strengthening Vital and Health Statistics	14	35	Partially achieved

Thirteen countries and territories achieved or maintained the indicator. Eighteen countries and territories partially achieved the indicator.

Member States approved the adoption of the Plan of Action for the Strengthening of Vital Statistics 2017-2022 in recognition of the need to build upon achievements made during the prior plan of action (2008-2013, extended to 2016). Moreover, in 2019 Member States approved the regional Plan of Action for Strengthening Information Systems for Health. This new commitment reinvigorates countries' efforts to ensure that information systems for health, including those for vital statistics, are strengthened, bearing in mind the need to integrate systems to ensure interoperability and openness while safeguarding privacy and confidentiality of data. Within the framework of these mandates, PASB has worked alongside Member States to conduct assessments of IS4H across the Americas as a first step toward implementing measures that will contribute to improving the quality and coverage of vital and health statistics. During this time, the Region saw the following improvements:

- 21 Member States achieved the targets to improve the coverage of births, and 16 achieved their respective targets for coverage of deaths, as measured by records captured by countries' routine information systems.
- 23 Member States met the targets for improving the quality of vital statistics data. In six countries, the proportion of ill-defined causes of death has been reduced.
- Most countries in the Region now routinely capture birthweight through birth certificates.
- 20 countries have established inter-institutional committees designed to strengthen health information and streamline processes for coordinating information management for vital statistics (particularly births and deaths).
- All 35 Member States' vital statistics systems were assessed through diagnostics, with diagnostics recently updated for ten countries.
- Interagency efforts were undertaken to develop a renewed diagnostics tool following the model used to assess countries' information systems for health using the IS4H maturity assessment tool. This has been made feasible by collaboration with the World Bank, UNFPA, ECLAC, and Member States, including representatives from their national statistics offices and civil registration offices.
- The Region has benefited from inter-country cooperation facilitated through the Latin American and Caribbean Network to Strengthen Health Information Systems (RELACSIS). Managed by PASB, this network has permitted the delivery of South-South and triangular technical cooperation through (primarily online) webinars, forums, newsletters, and bulletins available to its over 70,000 registered users. RELACSIS has helped showcase over 70 practices from across the Region aimed at strengthening health information systems. Fifty seminars have been delivered on various topics, including electronic medical records, the methodology for Deliberate Search and Reclassification of Maternal Deaths (BIRMM), and chronic kidney disease of non-traditional causes, among others. RELACSIS has also served

	as host for delivering 15 cycles of online trainings in ICD-10 coding and the correct completion of death certificates (available also in app form in English, Spanish, and French). This network is made possible by generous support from USAID, with continuous collaboration from ECLAC, the World Bank, the Inter-American Development Bank, UNFPA, and UNICEF.			
4.4.2	Number of countries and territories with functional mechanisms for governance of health research	5	26	Partially achieved

Nine countries achieved the indicator with all four criteria. Nine countries partially achieved the indicator, having achieved three of the four criteria.

Seventeen countries have ethical standards for research involving human subjects.[8] Knowledge translation processes to scale up the systematic integration of research evidence into policy and practice are in place in 16 countries. An annual increase in the proportion of prospectively registered clinical trials was recorded in most countries.[9,10] An assessment in 2018 showed that a larger number of countries had a national policy (16) and/or agenda (8) on research for health, but several of these have expired or become outdated.[11,12] As a result of the 2018-2019 assessments, PAHO is preparing a summary of recommendations and practices to guide countries in developing and updating policies and agendas on research for health. The BMJ and the Pan American Journal of Public Health published a special series assessing progress in the Region with respect to advancement of the policy on research for health.

De facto adherence to international ethical standards for human subjects research does not always imply the establishment of national laws, regulations, or guidelines as defined by this indicator. Furthermore, in several countries, existing national laws, regulations, and guidelines govern only a subset of human subjects research projects, namely clinical trials with drugs and devices. This poses the challenge of expanding ethical governance from that subset to all research with human subjects as required by international ethical standards. Finally, as agreed by Member States in 2018,[13] these standards constitute one key element of research ethics systems, yet a systemic approach to research ethics must be sought.

[8] Office for Human Research Protections, U.S. Department of Health and Human Services. International compilation of human research standards, 2019 edition. https://www.hhs.gov/ohrp/sites/default/files/2019-International-Compilation-of-Human-Research-Standards.pdf

[9] García-Vello P, Smith E, Elias V, Florez-Pinzon C, Reveiz L. Adherence to clinical trial registration in countries of Latin America and the Caribbean, 2015. Rev Panam Salud Publica 2018;42:e44. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6386091/

[10] International Clinical Trial Registry Platform, World Health Organization. http://apps.who.int/trialsearch/

[11] Etienne D, Abbasi K, Cuervo LG. Research for health in the Americas. Editorial, July 2018. BMJ 362:k2944. https://www.bmj.com/content/362/bmj.k2944

[12] Cuervo LG, Bermúdez-Tamayo C. Development of research for health in Latin America and the Caribbean: collaboration, publication and application of knowledge. Gac Sanit 2018;32(3):206-208. http://www.gacetasanitaria.org/es-pdf-S0213911118300475

[13] Pan American Health Organization. Bioethics: toward the integration of ethics in health: final report. CD56/INF/21. http://iris.paho.org/xmlui/bitstream/handle/123456789/49706/CD56-INF-21-e.pdf?sequence=1&isAllowed=y&ua=1

Assessment of output indicators

OPT #	OPT Title	OPT Indicator Text	Baseline 2017	Target 2019	Assessment Rating
4.4.1	Comprehensive monitoring of the global, regional, and country health situation, trends, inequalities, and determinants, using global standards, including data collection and analysis to address data gaps and system performance assessment	Number of countries that have produced a comprehensive health situation and trends assessment during 2018-2019	8	27	Partially achieved
Six countries achieved the indicator, and eight countries partially achieved the indicator. PAHO Member States are increasing their efforts to produce strategic information for the purpose of health planning. The knowledge generated by a health situation analysis (HSA) allows a national health system to plan using the best available evidence. Countries of the Region, in collaboration with PASB, should continue taking steps to ensure availability of the valuable information provided by an HSA. They should strive to produce comprehensive HSA reports that incorporate certain strategic components that are frequently missed, such as a health inequalities assessment, health impact assessment, and assessment of social participation and advocacy. Analysis of health outcomes stratified by selected available indicators (social, economic, education) in cross tabulations will support this analytical effort.				
4.4.2	Implementation of the regional Strategy and Plan of Action on eHealth	Number of countries and territories implementing an eHealth strategy	9	19	Achieved
Nineteen countries achieved the indicator. These countries are working toward the health sector's digital transformation as they continue to formulate and apply policies, tools, and methodologies on digital health in the context of the Plan of Action for Strengthening Information Systems for Health, recently approved with strong support from PASB Member States. This new Governing Bodies document (CD57/9) includes lines of action encouraging Member States to ensure that data are increasingly interoperable and readily accessible through open data initiatives, and that policies, strategies, and mechanisms are in place to optimize the benefits of information and communication technologies. The steadily increasing rates of internet access across the Americas represent significant opportunities for the future of public health. Artificial intelligence also holds promise as greater amounts of data are made available. New technologies and innovations present possibilities for reaching sectors of the population that were previously without easy access to the health system. While reaping the benefits of digital health, countries must continue to take steps to ensure that adequate mechanisms and regulations are in place to protect the confidentiality, security, and privacy of health data. Member States should also continue to carefully assess prior evidence before rolling out new interventions, which should be paired with monitoring and evaluation and assessments. PASB and its partners will continue to deliver technical cooperation to Member States as the countries navigate challenges inherent in the evolving field of digital health.				

4.4.3	Implementation of the regional Strategy and Plan of Action on Knowledge Management and Communications	Number of countries and territories implementing the regional Strategy and Plan of Action on Knowledge Management and Communication	6	24	Partially achieved

Thirteen countries achieved the indicator. Eleven countries and territories partially achieved the indicator.

- Countries and territories implemented initiatives related to the capacity to produce, record, classify, and circulate scientific and technical knowledge. Activities were related to the dissemination of local scientific and technical literature, contributions for the LILACS database and the Virtual Health Library (VHL). Special attention was given to projects such as the e-BlueInfo app (nine countries/territories), the VHL on Traditional, Complementary and Integrative Medicine (13 countries/territories), and the VHL on Nursing (eight countries/territories and Portugal).
- Nevertheless, only nine countries/territories organized events on scientific communication aiming to foster the skills of authors to publish evidence-based papers. At the end of 2019, there were 881 journals indexed in the LILACS database, with Argentina, Brazil, and Colombia as leading countries on titles.
- The 189 PAHO/WHO Collaborating Centers (CCs) across 16 countries in the Region have provided technical cooperation to PASB, WHO, and Member States. Two CCs are dedicated to knowledge management themes.
- The Research4Life program provides access to scientific information to decision makers, researchers, and other target audiences in the Americas. Seventeen countries and territories are eligible for the program; however, only a few of them have carried out relevant activities on training/capacity building or increased the number of institutions registered. For 2020-2021, PASB plans to raise awareness of Research4Life, including in four countries soon to become eligible: Cuba, Colombia, Ecuador, and Peru.
- In general, there was little progress in the implementation of policies, programs, tools, and assets on knowledge management or organizational learning. However, some countries have implemented, or are in the process of implementing, policies on open access/open source for scientific journals or research funded by public funds.
- Digital/institutional repositories are now more common in local health authorities as part of the effort to make their institutional and technical information available and interoperable among bibliographic databases. Examples include initiatives in Brazil, Dominican Republic, El Salvador, and Puerto Rico using the PASB Institutional Repository for Information Sharing as a model.
- Efforts to establish institutional/national frameworks must be encouraged so that countries and territories can have sustainable mechanisms to complete this unfinished agenda on knowledge management and related themes. These are crucial components of the Sustainable Health Agenda for the Americas 2018-2030 and are reflected in the PAHO Strategic Plan 2020-2025.

4.4.4	Countries enabled to address priority ethical issues related to public health and research for health	Number of countries and territories with accountability mechanisms to review research or incorporate ethics into public health	11	13	Achieved

Thirteen countries achieved the indicator.

Countries that had achieved the indicator based on the research ethics component continue to make progress on the public health ethics component, mostly through the integration of ethics in PAHO technical cooperation in key areas of public health (e.g., immunization, neglected diseases, noncommunicable diseases) and in national surveillance programs.

4.4.5	Implementation of the PAHO Policy on Research for Health	Number of countries and territories implementing the PAHO Policy on Research for Health	1	18	Partially achieved
Eleven countries achieved the indicator. One country partially achieved the indicator. The Caribbean Health Research Council (CHRC) previously had a policy for CARICOM countries, but the policy expired, and CARPHA (which absorbed the functions of the CHRC) has not yet updated it. PAHO worked with CHRC in the development of and consultations for the regional policies, and PAHO could work with CARPHA to update the Policy on Research for Health for the Caribbean, or support individual countries.					
4.4.6	Countries enabled to strengthen their capacity to generate and apply scientific evidence	Number of countries and territories integrating scientific evidence into practice, programs, or policies using standardized methodologies	7	13	Achieved
All 13 countries achieved the indicator. Eleven countries adopted standardized mechanisms developed by PASB to support the development and implementation of evidence-informed recommendations. Eight countries participated in the development of the PAHO guide entitled Strengthening National Evidence-Informed Guideline Programs: A Tool for Adapting and Implementing Guidelines in the Americas. More than 100 GRADE guidelines have been produced in the Region and are available in the BIGG database; more than 800 experts from 15 countries were trained in evidence generation and use. The Evidence Informed Policy Networks (EVIPnet) supported the strengthening of knowledge translation and evidence-informed policy development in 11 countries. Through the Improving Program Implementation through Embedded Research (iPIER) initiative, 12 countries have strengthened their capacity to institutionalize the use of scientific evidence for improvement of programs, services, and policy implementation. PASB played an active role in the generation of evidence in 12 countries, which was needed to strengthen essential public health guidance and actions advancing toward the Sustainable Development Goals.					
4.4.7	PAHO health information systems enhanced to facilitate analysis of information from Member States and the PASB to facilitate monitoring of regional and national targets in line with the Organization's commitments and mandates	Platforms in place to facilitate monitoring and reporting of the Strategic Plan impact indicators and the Sustainable Development Goals health targets	Platform available for the monitoring of the 9 (12) selected impact indicators	Platform available for the monitoring of the 9 (12) selected impact indicators	Partially achieved
PASB has tools in place to monitor the nine impact indicators of the PAHO Strategic Plan 2014-2019. These tools work in conjunction with the Strategic Plan Monitoring System used by Member States to monitor output and outcome indicators for this Strategic Plan. It should be noted that these tools do not constitute a platform, as they are updated on an ad hoc basis and are currently not available to external audiences seeking to track progress toward fulfillment of the Strategic Plan. PASB aims to develop a dashboard through the Health Information Platform for the Americas (PLISA) that will permit external users to observe progress at the regional and country levels toward SDG 3 indicators and other corporate indicators reflected in the PAHO Strategic Plan 2020-2025 and the Sustainable Health Agenda for the Americas 2018-2030.					

Program Area 4.5: Human Resources for Health **OUTCOME: Adequate availability of a competent, culturally appropriate, well regulated, well distributed, and fairly treated health workforce** OCM Indicator Assessment: 0/3 achieved, 3/3 partially achieved OPT Indicator Assessment: 3/3 partially achieved	**Rating: Partially met expectations**

Assessment of outcome indicators

OCM #	OCM Indicator Text	Baseline 2013	Target 2019	Assessment Rating
4.5.1	Number of countries and territories with at least 25 health workers (doctors, nurses, and midwives) per 10,000 population	25	31	Partially achieved
Twenty-six countries and territories achieved the indicator. Two countries partially achieved the indicator. PASB will continue to support countries in their efforts to strengthen planning capacity and address the challenges posed by the migration of health professionals, particularly in the Caribbean. It is essential to keep in mind the global target of 44.5 health workers (physicians, nurses, and midwives) per 10,000 population by 2030.				
4.5.2	Number of countries and territories with national training programs on public health and intercultural competencies for primary health care workers	8	23	Partially achieved
Eight baseline countries and eight of the 15 target countries and territories achieved the indicator. Five countries and territories partially achieved the indicator. During the 2018-2019 biennium, PASB supported countries to develop training programs on public health and intercultural competencies for primary health care workers to support progress toward universal health. That experience confirms the need to develop inter-professional teams at the first level of care with combined competencies in comprehensive care and an intercultural and social determinants approach to health. Also needed are systems for evaluating and accrediting health professions programs that include standards related to the scientific, technical, and social competencies of graduates.				
4.5.3	Number of countries and territories that have reduced by 50% the gap in the density of health workers (doctors, nurses, and midwives) between subnational jurisdictions (province, state, department, territory, district, etc.) that have a lower density of health workers than the national density	11	19	Partially achieved
Twelve countries and territories achieved the indicator. Four countries and territories partially achieved the indicator and are making progress toward achievement.				

There are two initial challenges in the evaluation of this indicator: *a)* to develop an information system that measures HRH at the subnational level, and *b)* to define the ideal density. Reported compliance does not necessarily mean that a country has achieved the optimum distribution of health workers, but instead means that it has made some progress in narrowing the gap between higher-density areas and underserved areas.

It is important to note that promoting health systems changes that require an active HRH component, with the development of workforce strategic planning units and information systems, seems to facilitate the understanding and the adoption of policies to reduce this gap. For this reason, one of the key objectives of the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018-2023 is to promote the equitable distribution and retention of health workers through the development of a professional and economic incentives policy that considers gender and is consistent with the specific needs of each community, especially in underserved areas.

Assessment of output indicators

OPT #	OPT Title	OPT Indicator Text	Baseline 2017	Target 2019	Assessment Rating
4.5.1	Countries that are developing an HRH information system integrated into their health information system with distribution of health personnel, particularly at the primary health care level	Number of countries and territories that are developing an integrated HRH information system	11	20	Partially achieved

Twelve countries achieved the indicator. Four countries partially achieved the indicator.

One of the main challenges to advancing HRH policies is the lack of relevant information to support policy, planning, and decisions based on contextually robust evidence. Although countries now realize the importance of HRH planning, team capacity building occurs in a very dynamic (political) context, and there is no systemic view that aggregates the fragmented and multi-sourced data.

PASB supported the development of HRH policies and information systems in all Member States, particularly in Belize, El Salvador, Guyana, and Puerto Rico, where intersectoral HRH strategic planning workshops were held. Guatemala and Costa Rica also held intersectoral HRH planning workshops in 2019. A more systemic approach is currently being used in Bolivia, reviewing the document on HRH gaps and the need for specialist training in collaboration with the World Bank.

The partnership with WHO for the National Health Workforce Accounts (NHWA) provided three workshops for the country focal points in 33 countries and enabled the Region to develop or continue developing their HRH information systems.

This indicator, with more detailed attributes, is included in the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage, intended to help Member States identify what they need to do to strengthen and enhance their HRH information systems.

4.5.2	Countries that promote national policies oriented to the transformation of health education aligned with universal access to health and universal health coverage and the social mission of academic institutions	Number of countries with national policies and incentives for academic institutions to define social missions or/and offer study programs oriented toward universal access to health and universal health coverage	12	21	Partially achieved

Seventeen countries achieved the indicator: all 12 baseline countries plus five target countries.

All the baseline and target countries are working with their educational systems to better align their goals with the health needs of the population. Most higher education programs in health include public health topics and discussion of the concept of universal health. Unfortunately, this is usually just one fragment of a curriculum that is otherwise very biomedical specialties-based and hospital-based. Attempts at educational transformation need to avoid the tendency to maintain or return to the status quo.

The accreditation process linked to incentives is a powerful enabler of educational changes. PASB is working with accreditation bodies around the Region to promote inclusion of the standards and indicators related to social accountability, and with the educational sector to promote educational transformation toward universal health.

Periodic changes in governments and their educational priorities have posed a challenge to the achievement of this output. More than ever, the experience during the past biennium confirms the need to establish permanent coordination mechanisms and high-level agreements between the education and health sectors to align education and professional practice with the current and future needs of health systems.

4.5.3	Countries and territories enabled to develop and implement innovative strategies and technologies for development of lifelong-learning education programs that include inter-professional education to improve the skills of health personnel in public health and clinical management areas	Number of countries and territories that have continuing education strategies and programs for health personnel oriented toward public health and clinical management areas through the Virtual Campus on Public Health or equivalent e-learning networks	12	41	Partially achieved

Thirty-six countries and territories achieved the indicator. Four countries partially achieved the indicator.

The Virtual Campus for Public Health is either offering programs directly or helping the countries develop their capacities and stimulating the creation of e-learning networks. The VCPH continues to grow, with more than 700,000 participants as of December 2019. The VCPH node in Barbados centralizes and responds to the needs of countries in the Caribbean subregion.