Evaluation of the Pan American Health Organization's technical cooperation on the health workforce in the Region of the Americas

Final report

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Abbreviations and acronyms

CARICOM	Caribbean Community
COMISCA	Council of Ministers of Health of Central America and the Dominican Republic (Consejo de Ministros de Salud de Centroamérica y República Dominicana)
COVID-19	coronavirus disease 2019
ERG	Evaluation Reference Group
HWF	health workforce
MERCOSUR	Southern Common Market (Mercado Común del Sur)
MoH	ministry of health
MS	Member State
ORAS	Andean Health Organization (Organismo Andino de Salud)
PAHO	Pan American Health Organization
SDG	Sustainable Development Goal
SHAA2030	Sustainable Health Agenda for the Americas 2018–2030
SICA	Central American Integration System (Sistema de la Integración Centroamericana)
SUS	Unified Health System (Sistema Único de Saúde)
TC	technical cooperation
ToC	theory of change
WHO	World Health Organization

Executive summary

The health workforce (HWF) [1] is a critical determinant of health system performance and resilience. Across the Region of the Americas, persistent challenges related to HWF availability, distribution, retention, and training were further intensified by the coronavirus disease 2019 (COVID-19) pandemic. For several decades, the Pan American Health Organization (PAHO) has worked with Member States (MSs) across the Region to address these structural HWF challenges through technical cooperation (TC) initiatives aimed at strengthening national capacities and health systems. Given the strategic importance of the HWF and the scale of PAHO's TC in this area, it is essential to assess the role and contribution of this cooperation. The evaluation covered the period 2018–2024, considering PAHO's strategic plans, mandates, expected outcomes, and contributions to global strategies and plans, while taking into account the post-pandemic context.

Evaluation methodology and tools

This evaluation used a mixed-methods approach organized around evaluation questions across four dimensions: relevance and coherence, effectiveness, efficiency, and sustainability. The evaluation was conducted in two phases. Phase 1 included a document review, an online survey administered to all MSs, and online interviews with key stakeholders in Barbados, the Plurinational State of Bolivia, Brazil, Colombia, the Dominican Republic, Guatemala, Jamaica, and Paraguay. Phase 2 included on-site case studies in Brazil, Guatemala, and Guyana.

Key findings

The analysis of contextual factors identified the COVID-19 pandemic as a major disruptive event affecting HWF development and performance. The pandemic intensified workloads, emotional distress, migration, and workforce losses across the Region. In addition, countries experienced significant socioeconomic changes and differing levels of advancement in the development of HWF policies and plans.

The findings give rise to an overall positive assessment of PAHO's TC. Beyond supporting policy and strategy development, PAHO's TC also seeks to strengthen implementation capacities and address contextual factors that influence the translation of policies into practice. Member States consider PAHO's TC to be relevant, coherent, and aligned with their needs and priorities. However, they highlighted the need to strengthen TC in the analysis of country-specific challenges and in areas where national needs do not fully align with PAHO's approach. A health equity approach that accounts for gender equality, ethnicity, socioeconomic status, social determinants of health, and populations in situations of vulnerability is strongly considered by PAHO to be important, and recognized by MSs in their policies and programs as such, although ensuring that such an approach is followed is not always treated as a top priority by MSs in practice.

PAHO's TC is regarded by MSs as effective, particularly in the development of HWF plans and the implementation of national policies. However, the effectiveness of PAHO's TC was assessed as lower in activities related to strengthening HWF capacity, considering migration, reducing disparities in rural and urban HWF distribution, and addressing needs at the subnational level. The PAHO Virtual Campus for Public Health was recognized as a valuable resource for training. Other training activities, such as hybrid training models involving several countries, were identified as successful examples of TC to address HWF shortages associated with

[1] Although the original documentation of this evaluation uses the term "human resources for health" (HRH), this report uses the term "health workforce" (HWF) to emphasize health workers as professionals with capacities, skills, and agency.

migration. Finally, PAHO was viewed as an effective actor in overcoming barriers and accelerating the implementation of HWF-related activities.

The concept of efficiency in HWF development was linked to several issues, including geographical distribution, personnel working hours, and service delivery by specific professional categories. Although it was not possible to fully assess efficiency levels due to limitations in the available information, findings indicate that the use of digital tools, virtual training, and digital literacy strategies are contributing to reaching a larger number of health workers annually. However, challenges remain as regards incomplete data integration, limited connectivity in rural areas, and constrained operational capacity. There is also a need to explore different TC/working modalities, forms of collaboration, and partnerships.

Regarding sustainability, the findings indicate that MSs recognize its importance and acknowledge that political stability, commitment, and higher priority resourcing of this key area at the national level are critical factors. The evaluation also identified key challenges, such as limited specific mechanisms to ensure financial and operational sustainability, and the high turnover of personnel in leadership positions.

Key contributions from case studies

The three case studies allowed the evaluation to identify key challenges at both the country and regional levels. PAHO's TC supported training activities, work on the geographical distribution of the HWF in the three countries, and assessments of working conditions. The case studies provided insights into addressing local challenges, such as:

- The participation of social actors in the development of HWF policies within the institutional structure of the Unified Health System in Brazil to address structural challenges such as the uneven distribution of the HWF and the integration of gender and health equity considerations as transversal issues;
- Strengthening HWF capacities and distribution to provide health care to indigenous populations in Guatemala;
- Implementation of successful training activities, such as a hybrid training program for nurses in Guyana, to address HWF shortages associated with migration and national development.

Conclusions and lessons learned

Conclusions

1. There is a high degree of coherence and alignment between the specific strategies implemented through PAHO's TC on the HWF and the needs, policies, and programs of MSs. However, this alignment is less evident in health equity issues that form part of PAHO's broader agenda.
2. Countries recognize that PAHO has a great capacity for diagnosing challenges but that monitoring policy implementation, depending on the specific issue, tends to be problematic, considering that governments can reduce financial support for and commitment to the achievement of goals depending on political cycles or trends.
3. Member States recognize the strong coordination and response capacity of PAHO's TC, which helps in achieving established objectives, despite the replacement or elimination of positions in HWF TC teams in certain countries and at the regional level.
4. Member States highlight the effectiveness of TC in promoting digital educational tools, particularly the use of the Virtual Campus for Public Health.
5. PAHO's TC effectively supports MSs in addressing transnational and structural challenges related to the HWF, in areas such as migration.
6. Countries have high expectations of a quantitative and qualitative increase in PAHO's TC on the HWF in the future.
7. Technology transfer mechanisms, such as the Virtual Campus for Public Health and other digital resources, increase the efficiency of PAHO's TC on the HWF.
8. Political instability reduces the sustainability of TC actions on the HWF and, in some cases, limits the ability to develop long-term planning scenarios.
9. Historical challenges related to HWF distribution persist, particularly in highly vulnerable areas, and there are currently no solution proposals applicable across the entire Region.

10. Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves.

11. The political, economic, social, and health context of the Region is generating new challenges and strategic priorities for HWF development and for the role of TC.

Lessons learned

1. The greatest value of TC is realized when support extends beyond diagnosis and HWF policy development to include implementation support, improved management, and sustained follow-up at country level.

2. When TC combines analytical support with implementation accompaniment, it is more likely to be recognized as relevant and effective by MSs than when it remains focused primarily on diagnostics and planning.

3. Regional recommendations generate greater uptake when they are accompanied by context-specific implementation pathways that reflect country capacities, governance arrangements, and labor market realities.

4. Addressing HWF distribution challenges requires combining robust situational analysis with solutions tailored to national and subnational contexts, rather than relying on standardized approaches.

5. Challenges that are driven by regional labor markets, such as HWF migration, cannot be effectively addressed through country-level actions alone and require coordinated regional responses.

6. Digital solutions can significantly expand the reach and efficiency of TC, but their long-term value depends on investments in connectivity, digital literacy, and institutional sustainability.

7. The sustainability of HWF reforms depends as much on institutional and political continuity as on technical quality; embedding reforms in laws, regulations, and stable institutional structures helps protect gains during political transitions.

8. When demand for TC exceeds available resources, impact can be enhanced through strategic prioritization, differentiated cooperation modalities, and stronger targeting of support to areas of greatest added value.

Recommendations

1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining PAHO's comparative advantage in diagnostics, planning, and policy development.

2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.

3. Strengthen TC in HWF training, professional education, and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners.

4. Strengthen regional cooperation mechanisms to address HWF migration, support evidence-informed policy dialogue, and promote ethical and sustainable workforce mobility arrangements.

5. Support MSs in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems.


Iniciativa de Eliminación
OPS
Iniciativa de Eliminación

Introduction

The Pan American Health Organization (PAHO) Strategic Plan 2026–2031 *(1)* identifies the attainment of the highest level of health and well-being for all throughout the Region as its overarching impact goal. Through the iterations of its strategic plan, PAHO has supported Member States (MSs) in the Region of the Americas for several decades in addressing challenges related to the availability, access for all, training, and retention of the health workforce (HWF).[1] This support has included evidence-based technical cooperation (TC) aligned with the Policy on the Health Workforce 2030: Strengthening Human Resources for Health to Achieve Resilient Health Systems *(2)*, the Sustainable Health Agenda for the Americas 2018–2030 (SHAA2030) *(3)*, the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023 *(4)*, and the PAHO Strategic Plan 2020–2025 *(5)*.

The importance of the HWF in any health system and the scope of PAHO's TC in this area make it necessary to assess the role of this cooperation. A previous evaluation, the midterm evaluation of PAHO's TC on the HWF *(6)*, identified progress and gaps in the coherence and impact of the TC on the HWF. However, due to the socioeconomic development of the Region, the changes in countries' health systems, and the impact of the coronavirus disease 2019 (COVID-19) pandemic, it was considered necessary to conduct an updated evaluation accounting for the post-pandemic context. The evaluation also recognizes that HWF challenges are shaped by social determinants of health such as gender, territorial health disparities, interculturality, migration, disability, and social vulnerabilities, which influence workforce availability, distribution, working conditions, leadership opportunities, and access to training across the Region. This report presents the findings of an evaluation of PAHO's TC on the HWF. The evaluation covered the period 2018–2024 and aimed to generate evidence, lessons learned, and recommendations to strengthen PAHO's TC on the HWF. The evaluation provides strategic inputs for the implementation of the Policy on the Health Workforce 2030 and PAHO's Strategic Plan 2026–2031 *(1)*.

In accordance with its terms of reference (Appendix 1), the objective of this evaluation was to assess the relevance and coherence of PAHO's TC in strengthening the HWF in the Region in relation to the expected outcomes defined in its most recent strategic plan; mandates; and contributions to national, regional, and global goals, as well as its effectiveness, efficiency, and sustainability over the period 2018–2024, considering the post-pandemic context in the Region and across PAHO and its MSs. The evaluation covers all MSs in the Region and analyzes the context of PAHO's TC, including its coherence/relevance, effectiveness, efficiency, and sustainability. It also examines PAHO's TC activities, such as situation analysis, design, implementation, and evaluation of HWF-related interventions at the regional, national, and subnational levels. In addition, the evaluation considers the role of national and international health organizations, as well as other stakeholders involved in HWF planning, education, regulation, and labor market dynamics. The findings of this evaluation are intended to support PAHO, national stakeholders – including ministries of health (MoHs) and ministries of education, other government sectors, and civil society organizations – and international organizations in strengthening the effective use of PAHO's TC for HWF development.

Therefore, this evaluation contributes to:

- Determining the extent to which PAHO's TC has achieved its intended outcomes and impact on HWF outcomes;

[1] Although the original documentation of this evaluation uses the term "human resources for health" (HRH), this report uses the term "health workforce" (HWF) to emphasize health workers as professionals with capacities, skills, and agency.

- Identifying enabling factors and key barriers influencing the effectiveness of PAHO's TC in strengthening the HWF;
- Analyzing the efficiency of resource utilization in the implementation of HWF initiatives;
- Assessing the alignment of PAHO's HWF strategies and policies with the needs and priorities of MSs;
- Assessing the long-term viability and sustainability of HWF interventions and outcomes, and how past and ongoing TC efforts have contributed to laying the foundation for the implementation of the Policy on the Health Workforce 2030;
- Documenting successful strategies and areas for improvement to inform future TC.

This report begins by providing background information on and a brief description of the purpose and objectives of the evaluation. It then describes the evaluation methodology and data collection activities, followed by key findings, conclusions, lessons learned, and recommendations.


Canadá

1. Background

1.1. General landscape of the health workforce in the Region

Over the past few decades, countries in the Americas have faced challenges in ensuring the availability, adequate training, and retention of, and access for all to the HWF. Despite sustained national and regional efforts, staff shortages in the HWF remain a critical issue, particularly in rural and marginalized areas. These territorial health disparities frequently overlap with poverty, ethnicity, and geographical isolation, disproportionately affecting indigenous, Afro-descendant, and remote populations with limited access to qualified health personnel and culturally appropriate services. These gaps continue to limit the capacity to provide quality, responsive, and sustainable health services *(2, 4)*. Moreover, there is substantial variation in the development of health systems and the HWF across and within countries in the Region; while some countries have developed a solid and highly skilled HWF, with effective mechanisms of training and distribution, others remain at a more basic level, with limited or no HWF programs *(2, 3)*.

The social and economic development of the countries in the Region, added to the changes in their demographic and epidemiological profiles, has posed challenges to their health systems and generated the need for the HWF to respond to the new conditions. The HWF is also affected by the regional, national, and subnational context related to labor market conditions and migration flows, as well as issues around gender and health disparities. Women constitute the majority of the HWF across the Region. Despite this, profound structural gaps persist. There is marked occupational segregation, where women are predominantly concentrated in nursing and foundational care roles, while men are disproportionately represented in specialized medical fields and managerial positions.

Furthermore, female health workers continue to face significant wage gaps and the compounding burden of a double shift due to unpaid domestic and care work. While in some countries there have been important shifts in the gender composition of the HWF in specific areas, including an increase in the proportion of men in nursing and women physicians, these structural disparities remain a critical challenge.

In addition, the COVID-19 pandemic exacerbated and exposed long-standing technical and structural weaknesses in health systems worldwide. Health systems came under extreme pressure due to the sharp increase in demand for care and the urgent need to reorganize health personnel to respond to the pandemic. In some countries, the lack of protocols and adequate training for the HWF became evident during the pandemic response, adversely affecting performance and coordination. This situation exposed health workers to heightened levels of stress, physical and emotional exhaustion, and occupational risks, with direct consequences for both the quality of care delivered to patients and the health and well-being of the HWF *(5)*.

1.2. PAHO's technical cooperation on the health workforce

PAHO's TC on the HWF is primarily guided by the regional HWF agenda, particularly the PAHO Policy on the Health Workforce 2030 framework, which provides the overarching basis for strengthening HWF planning, development, recruitment, deployment, and retention *(2)*. Within this broader framework, PAHO's institutional mandates on gender equality, diversity, equity, and human rights operate as important cross-cutting principles, including the PAHO Policy on Gender Equality and SHAA2030 *(3)*. These mandates help ensure that HWF policies and strategies

consider the differentiated needs and structural inequalities faced by women and groups in situations of vulnerability. Therefore, while the TC evaluated here was not designed exclusively around gender equality or human rights, these perspectives informed its contribution to more effective, participatory, and comprehensive health systems.

PAHO has been a key strategic partner for countries in the Americas in strengthening the HWF. It has provided evidence-based TC tailored to the specific realities of a country, to ensure that populations have access to sufficient, well-trained, and well-distributed health personnel. PAHO's TC aims to address country needs, but with a regional approach, to move toward universal health coverage and the Sustainable Development Goals (SDGs) and to promote topics like health equity and gender. PAHO participates in different steps of the process to improve HWF resilience, providing TC to MSs on the diagnosis of their HWF situation and on training, retention, and distribution strategies, either by advising MSs or by supporting the implementation of actions.

The Policy on the Health Workforce 2030: Strengthening Human Resources for Health to Achieve Resilient Health Systems *(2)*, approved by PAHO MSs in 2023, provides strategic and technical guidance to support countries in developing and implementing policies and actions to strengthen their HWF and build more resilient, equitable, and people-centered health systems. The policy is structured around five strategic lines of action: (1) strengthening governance and stewardship of the HWF; (2) developing and consolidating regulatory mechanisms; (3) strengthening interprofessional health teams integrated into primary health care-based networks; (4) enhancing HWF capacities through education, lifelong learning, and competency development; and (5) promoting decent working conditions and improving the protection and well-being of health workers. Together, these strategic lines aim to improve the availability, accessibility, quality, and sustainability of the HWF.

SHAA2030 *(3)* constitutes the highest-level policy framework in the Region and responds to the commitments of the United Nations 2030 Agenda for Sustainable Development. It integrates the HWF as a strategic axis for strengthening resilient health systems based on primary care, promoting health for all, gender equity, ethnic inclusion, and participatory social approaches. SHAA2030 fosters the planning and implementation of national HWF plans that are coordinated with educational and social policies, in addition to highlighting the need for sufficient and well-distributed personnel to support access to health for all.

The Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023 operationalized these regional commitments through concrete interventions *(5)*. Its priorities include consolidating the stewardship and governance of the HWF through national intersectoral policies, increasing public investment and expanding recruitment in primary care, improving working conditions with stable contracts and social protection, and adapting education and continuing education to epidemiological and demographic needs. It also emphasizes the importance of health information systems and HWF observatories to generate evidence and monitor progress.

Finally, PAHO's strategic plans for 2020–2025 and 2026–2031 consolidate the centrality of the HWF as an indispensable condition for achieving universal health coverage and national, regional, and global goals. The 2026–2031 plan envisions a Region of the Americas with better health and well-being for all, under the slogan "Together toward a Healthier Americas for All" *(1)*. To achieve this, PAHO is reinforcing its PAHO Forward strategic approach, aimed at generating institutional effectiveness and efficiency. In addition, it maintains its commitment to transparency and accountability by providing information on financial and human resources and programmatic results to MSs and the public. This transparency framework focuses on Strategic Objective 5 of the 2026–2031 plan, which addresses PAHO's leadership, governance, and performance as the regional public health agency.

PAHO's TC on the HWF takes place in a regional context that poses serious constraints, including high turnover in leadership positions, deep changes in the labor market and migration, and distributional disparities that can impede its influence. The COVID-19 pandemic revealed gaps in strategic planning related to the HWF in the Region. Even today, significant gaps persist in the availability of reliable information systems, planning strategies, and institutional

resilience in the face of health emergencies. The pandemic highlighted the need to develop regulatory and operational frameworks capable of dealing with crisis situations. In this post-pandemic context, PAHO has been playing a crucial role as a technical and expert agency supporting MSs by providing TC, strengthening national capacities, generating regional evidence, and facilitating the adaptation of global commitments to local realities. Through its activities, PAHO acts as a bridge between the global strategy of the World Health Organization (WHO) and regional and national action, ensuring that the HWF becomes a transformative driver for advancing sustainable health systems for all in the Americas. Against this backdrop, it is necessary to understand how PAHO's TC on the HWF contributes to addressing these challenges and to evaluate them in terms of its coherence/relevance, effectiveness, efficiency, and sustainability.

1.3. Previous evaluations of PAHO's work on the health workforce

The implementation of PAHO's TC has been accompanied by systematic monitoring and evaluation processes, including the midterm evaluation of PAHO's TC on the HWF *(6)*. This evaluation, conducted in 2022, assessed progress in implementing the strategic lines established in the Strategy on Human Resources for Universal Access to Health and Universal Health Coverage and in the Policy on the Health Workforce 2030, approved in 2023. It identified achievements such as the strengthening of national capacities for HWF planning, the consolidation of TC networks, and the improvement of information systems. It also highlighted the commitment of MSs to improving human resources management and noted that the COVID-19 pandemic created opportunities to increase investments in the HWF, expand recruitment, and strengthen training initiatives. However, TC on the HWF remains only partially consistent with the expected impact on the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023. The findings of this midterm evaluation are acknowledged as part of PAHO's institutional learning process and are considered here as part of the continuum in which this evaluation is also included, with an independent and forward-looking approach focused on the period 2018–2024.

2. Evaluation methodology and tools

This evaluation uses a mixed-methods approach, combining qualitative and quantitative data to conduct a comprehensive assessment of PAHO's TC on the HWF. The evaluation relied on stakeholder perspectives to provide insights into the implementation and reported effects of HWF policies in the participating countries, as well as PAHO's role in shaping these outcomes.

The evaluation adopted a gender-sensitive and health equity approach, ensuring that health equity issues were systematically integrated across all evaluative stages. This framework allowed for a nuanced understanding of how HWF policies and TC differentially impact various demographic groups within the health sector, moving beyond gender-neutral analysis.

The evaluation was guided by a set of questions organized into four dimensions (relevance/coherence, effectiveness, efficiency, and sustainability), while considering contextual factors that may affect these dimensions across the different countries, with particular attention to the post-pandemic period. The final evaluation questions were refined from those included in the terms of reference of this evaluation and are presented in Table 1.

Table 1. Evaluation questions

Relevance/Coherence	1. To what extent have contextual factors in the post-pandemic period (political, institutional, operational, organizational, financial, and cultural) determined the uptake of PAHO's TC on the HWF by MSs? 2. To what extent have the policies, programs, measures, and changes introduced by MSs with the support of PAHO's TC service provision been consistent with achieving the expected outcomes? 3. To what extent did PAHO's TC on the HWF incorporate health equity issues from the PAHO Strategic Plan (2026–2031), including intercultural approaches in HWF planning (particularly in contexts with multiple ethnic groups and languages), gender considerations (especially in countries with a highly feminized HWF), health for all and human rights approaches (including decent work, equal pay for equal work, incentives for hardship postings, and career development pathways), and disability? 4. To what extent are PAHO's TC interventions on the HWF aligned with the achievement of the 2030 SDGs (specifically SDG 3 – "Good Health and Well-Being" ["Ensure healthy lives and promote well-being for all at all ages"])?
Effectiveness	5. To what extent has PAHO's TC on the HWF supported the implementation of national policies to strengthen HWF governance in countries across the Region? 6. To what extent did PAHO's TC on the HWF address country needs and priorities related to strengthening health systems and the HWF in the post-pandemic period? 7. To what extent have PAHO's TC contributions helped improve HWF capacity, retention, and distribution in MSs? 8. To what extent has PAHO's TC on the HWF reached subnational levels beyond central-level planning, contributing to tangible implementation and results?

Table 1. Evaluation questions *(continued)*

Efficiency	9. To what extent were the financial, technical, and human resources allocated to PAHO's TC on the HWF sufficient, relevant, and effectively utilized? 10. How effectively did PAHO balance efficiency and the use of innovative digital approaches (e.g., virtual training) in its TC on the HWF? 11. What evidence exists of PAHO's contribution to broader health system strengthening through HWF initiatives? 12. To what extent did these resources contribute to the strengthening of the HWF and more resilient health systems in MSs?
Sustainability	13. Is PAHO's TC designed from the outset to enable the scalability of HWF policies? 14. What needs to be strengthened to enhance PAHO's TC on the HWF while addressing long-term HWF availability? 15. To what extent is PAHO's TC on the HWF contributing to resilient and sustainable health systems for all in MSs? 16. Which strategic TC actions should PAHO focus on to strengthen the HWF in MSs and advance universal access to health and universal health coverage? 17. What mechanisms are in place to enhance the sustainability of gains achieved through PAHO's TC on the HWF?

Note: HWF, health workforce; MS, Member State; PAHO, Pan American Health Organization; TC, technical cooperation; SDG, Sustainable Development Goal.

This evaluation was implemented in two phases. Phase 1 (conducted between September and December 2025) included three activities: (1) document review, (2) an online survey addressing all MSs in the Region and subregional cooperation mechanisms (the Southern Common Market (Mercado Común del Sur [MERCOSUR]), the Caribbean Community (CARICOM), the Andean Health Organization (Organismo Andino de Salud [ORAS]), Central American Integration System (Sistema de la Integración Centroamericana [SICA]), the Executive Secretariat of the Council of Ministers of Health of Central America and the Dominican Republic (Consejo de Ministros de Salud de Centroamérica y República Dominicana [COMISCA]), and (3) key stakeholder consultations in eight selected countries. In phase 2 (conducted between January and April 2026), the evaluation carried out three in-country case studies to validate and further examine emerging findings and observations from phase 1, and prepared final reports and dissemination products.

2.1. Phase 1

Document review

The document review was carried out simultaneously with the online survey and the stakeholder interviews in phases 1 and 2 of the evaluation. A search was conducted on the official websites of the MoHs of the eight countries selected for the study, plus Guyana, which was incorporated in phase 2. The review focused on identifying current policies, strategic plans, and other regulatory documents related to the HWF for the period 2018–2024. The document review also included data on the allocation of PAHO's financial resources to HWF. The selection of documents was based on their official status, validity, and relevance to HWF development and management. An overview of the HWF situation in the countries selected for phase 1 of the evaluation is presented in Appendix 2.

Online survey

An online survey was conducted on topics related to the evaluation questions across all MSs in the Region, plus Puerto Rico.[2] An online questionnaire was developed

[2] The evaluation refers to all MSs in the Region. Different activities of the evaluation refer to all countries or to some specific countries in order to capture more general or detailed information that can describe the situation in the whole Region.

to gather this information, with support from the PAHO evaluation team, which conducted follow-up efforts to ensure participation from countries across the Region. A list of potential interviewees was developed in collaboration with the PAHO evaluation team. The questionnaire was sent to MoH officers responsible for the HWF, PAHO country officers, and key personnel from international organizations via Microsoft Forms. The questionnaire was distributed in English and Spanish, depending on the official language of the country of the respondent.

The questionnaire included a brief explanation of the evaluation and requested informed consent to participate. It included a list of sentences related to the country context (or regional context, in the case of international organizations) and the evaluation questions, for which informants were asked to indicate their level of agreement using a five-point Likert-type scale, ranging from total disagreement (1) to total agreement (5). The data collection tools (including this questionnaire) are presented in Appendix 3. Scales were constructed for each evaluation dimension (relevance/coherence, effectiveness, efficiency, and sustainability) by summing the values of responses to each item and dividing by the number of questions to keep the original 1–5 scale. Item scores were reversed when necessary, so that higher scores indicate stronger ratings of each dimension.

Key stakeholder consultations (virtual interviews)

A set of online interviews was conducted with key stakeholders in eight MSs to get more detailed information on the evaluation questions. These interviews were conducted following an interview guide (Appendix 3) in the official language of the interviewee's country, after the provision of informed consent, and were audio-recorded with the interviewee's consent.

Countries for these interviews were selected based on (1) geographical distribution (countries representing different subregions of the Americas, namely the Caribbean, Central America, and South America); (2) health system development (countries with less developed health systems, identified by PAHO as priority countries); (3) political structure (countries representing a range of different political systems, such as centralized and federal structures, as well as Small Island Developing States; (4) health system evolution (countries that have experienced significant changes in their health systems in recent years); and (5) feasibility (countries in which political and social conditions make the evaluation feasible, e.g., selecting countries with stronger institutional continuity over those experiencing severe political instability, election periods, or severe natural events). Based on these criteria, Barbados, the Plurinational State of Bolivia, Brazil, Colombia, the Dominican Republic, Guatemala, Jamaica, and Paraguay were selected for the interviews in phase 1.

The evaluation team developed a list of potential interviewees. The PAHO evaluation team supported the refinement of this list and assisted with follow-up invitations to participate. Key stakeholder invitations were sent to: (1) MoH authorities and personnel involved in HWF planning, financing, and international cooperation; (2) national representatives of international partner organizations; (3) representatives of civil society organizations involved in tackling HWF-related issues; (4) key PAHO representatives at country offices; and (5) key representatives from regional integration mechanisms, including CARICOM, MERCOSUR, ORAS, and SICA.

2.2. Phase 2: case studies

In phase 2 of this evaluation, three countries were visited to conduct case studies, in which in-depth interviews were carried out with officials and other stakeholders. Specific data produced by the MoH and other institutions were also collected. The objective of the case studies was to obtain more detailed information about the evaluation questions to validate or further examine the findings of phase 1, and to generate evidence-based materials to disseminate knowledge and learning experiences from the evaluation. The case studies represented a variety of contexts in the Region.

The case study countries were selected based on the following criteria: (1) representation of different subregions of the Americas, namely the Caribbean, Central America, and South America; (2) lower levels of health system development, on the basis of which PAHO identifies priority countries; (3) identified in phase 1 as facing particular challenges, as well as varying levels of progress,

in HWF policies and in the effective use of PAHO's TC; (4) representation of different socioeconomic contexts; and (5) feasibility to conduct a case study, considering socioeconomic and environmental conditions, as well as timely and active response to information requests during phase 1.

Based on these criteria, Brazil, Guatemala, and Guyana were selected to conduct the case studies.

- **Brazil.** This is the largest country in South America, with a public health system, the Unified Health System (Sistema Único de Saúde [SUS]) and substantial information on its HWF. Brazil's health system has a federalized structure down to the level of municipalities. The country also has connections with other countries in the Region related to HWF activities and TC.
- **Guatemala.** This Central American country was identified as having substantial health disparities in HWF distribution, high population vulnerability, and minimal progress in HWF planning. It is also considered a priority country by PAHO. The case study in Guatemala aimed at providing in-depth information on some challenges in Central America, as well as insights into the context of a country with limited HWF planning development.
- **Guyana.** Guyana shares social and cultural characteristics and has strong links with other countries in the Caribbean. It is experiencing substantial economic growth due to the development of its oil industry, which poses challenges to the health system and HWF. Guyana was selected to provide insights about the role of PAHO's TC on the HWF in Caribbean countries.[3]

2.3. Data analysis approach

The evaluation integrates findings from the document review, stakeholder consultations, and site visits to triangulate information, validate findings, and ensure robust conclusions. The analytical approach is based on a theory of change (ToC). At the beginning of this evaluation, the ToC was reconstructed and adapted from an existing ToC and results framework embedded in PAHO's Strategic Plan 2026–2031 *(1)*. In this reconstruction it was possible to critically examine assumptions, causal pathways, and implementation logic to support theory-based analysis. The ToC identifies, under a set of transformational assumptions, the key activities that PAHO should conduct in terms of its TC to reach a set of immediate outputs and intermediate outcomes that will lead to the final impact of advancing toward universal health coverage and health for all in the Americas. Appendix 4 presents the ToC refined over the development of the evaluation and discusses its assumptions and causal logic.

A transversal analytical lens was applied throughout the evaluation to examine how gender, health equity, interculturality, disability, human rights, and social determinants of health considerations influence HWF planning, governance, retention, working conditions, leadership opportunities, and access to services. Based on these methodological considerations, the analysis combined three complementary components:

1. Quantitative analysis: It includes a descriptive quantitative analysis of the phase 1 stakeholder survey, characterizing the population according to their responses to questions in the four dimensions of this evaluation. To analyze the survey results, responses were processed individually and then grouped into thematic blocks corresponding to the evaluation criteria, with scales constructed for context, relevance/coherence, effectiveness, efficiency, and sustainability. Medians were used as the main statistical reference, given the ordinal nature of the scale and the non-normal distribution of responses. These estimates were calculated for the entire sample, stratified by type of institution (MoH or academic institution, on the one hand, or international organization, including PAHO representatives or staff and members of regional organizations, on the other), and for the eight countries selected for stakeholder

[3] When selecting the countries for the case studies, Barbados was initially chosen as the Caribbean case study, as it exemplifies the context of this subregion. However, due to the anticipated election period in the country, and in agreement with the Evaluation Reference Group, Barbados was substituted with Guyana.

interviews as described above. A quantitative analysis of information about the resources budgeted and allocated by PAHO for TC on the HWF was also conducted to identify levels and trends over the period 2020–2024. This section also includes a statistical review of national and international agencies: WHO/PAHO, the World Bank, and the Institute for Health Metrics and Evaluation, among others.

2. Qualitative analysis: It includes a thematic analysis of information collected in both phases 1 and 2 of the study. It analyzes stakeholder perspectives to capture insights on the effectiveness of HWF policies, implementation challenges, barriers, PAHO's role, gender issues, and lessons learned.

3. Triangulation: Findings obtained by different methodological approaches were integrated across data sources to enhance validity and reliability, identify convergences and divergences, and obtain relevant lessons on the sustainability of HWF policies in the Region.

Stakeholder validation and reporting

Reports generated in this evaluation have been presented to the Evaluation Reference Group (ERG) and other relevant stakeholders at PAHO to obtain feedback, provide quality assurance, and support validation. Methods, findings, and preliminary recommendations derived from the evaluation were discussed in a workshop with ERG members and stakeholders from PAHO involved in the HWF in regional and central offices. In this workshop, participants were requested to grade preliminary recommendations according to their feasibility, priority, and relevance. Participants also provided feedback about key aspects that recommendations should address in order to be effective, like the identification of a target audience, their consonance with countries' health policies, and their focus on strategic issues. This discussion continued in another meeting with ERG members and helped the evaluation team narrow down and refine the final recommendations considering the context and experience of the workshop participants.

2.4. Procedures

The evaluation started with the elaboration of an **inception report (deliverable 1)**, which describes the evaluation plan. The **preliminary findings report** represents **deliverable 2** of the evaluation. These products were presented to and approved by the ERG. Following the implementation of the case studies, an in-person meeting and workshop was held in Washington D.C. to present the results to and discuss preliminary recommendations after phase 2 of the evaluation with PAHO stakeholders involved in the HWF, and with the ERG. This workshop was followed by a subsequent discussion meeting with ERG members.

This final evaluation report (deliverable 3) constitutes the last deliverable of the evaluation. Once the final report is approved, the evaluation team will collaborate with the PAHO evaluation team to respond to editorial queries in preparation for publication of the final report. The evaluation team will also prepare policy briefs in English and Spanish, to be delivered following publication of the final report.

2.5. Ethical considerations

This evaluation followed international ethical standards, including the Declaration of Helsinki *(7)*, the evaluation norms of the United Nations Evaluation Group *(8)*, the PAHO Evaluation Policy *(9)*, and the related Evaluation Handbook *(10)*, which ensure transparency, accountability, and methodological best practices. The implementation of this evaluation by an external group, which declares no conflict of interest with any stakeholder related to this evaluation, promotes the principles of impartiality, independence, and credibility.

All participants were treated with respect, fairness, and dignity. Participation in all data collection activities was voluntary and preceded by informed consent letters adapted to the cultural and linguistic context (Appendix 3). Physical, emotional, or occupational hazards were minimized, ensuring safe interview environments (in person or virtual) and avoiding any potential harm. The selection of participants was consistent across countries, including diverse health system stakeholders and groups involved in the HWF. Interviews, either via videotelephony or in

person, were conducted in an environment of empathy and trust. The information collected was treated with strict confidentiality, safeguarded, and used only for the purposes of this evaluation, with results presented anonymously. The findings have been reported with transparency, based on verifiable evidence, with results presented anonymously, and with due respect for the commitments established with PAHO and the countries and informants involved.

2.6. Limitations

Methodological limitations inherent to the evaluation design

The evaluation followed an observational study framework and leveraged a range of data sources to generate meaningful insights, but without making causal claims; furthermore, practical considerations related to time and resource availability limited the scale of the interviews conducted, which may have affected the evaluation's ability to capture the full range of contextual and operational factors. This limitation was addressed by selecting key informants from different areas or institutions, especially in the countries in which the case studies were conducted. It was relevant to capture the perspectives of PAHO and other regional integration mechanisms, so representatives from these stakeholders were included in the interviews as well.

In its qualitative component, the evaluation faced the individual subjectivity and memory bias inherent in this type of methodological approach. Therefore, in the analytical phase, the aim was to triangulate the responses of the different actors and additional documentary sources to find a balance in the information collected using different methods.

Finally, the evaluation aimed to analyze the financial resources budgeted and allocated for the HWF in the Region. The limited level of disaggregation of this information made it difficult to conduct a more detailed analysis that could explore the efficiency of TC on the HWF. Given this, the analysis was limited to providing a landscape of budgeted and allocated resources over time and discussing some associations with the implementation of TC activities in the countries in which the case studies were conducted.

Contextual constraints beyond the evaluation's control

Another potential limitation is the capacity to understand variations in the performance of PAHO's TC on the HWF over the whole study period (2018–2024), which includes the COVID-19 pandemic. In addition, the social and economic context of some countries has changed dramatically in recent years. Although the evaluation recommendations are forward-looking, a specific effort was made in the data collection and analysis to distinguish conditions that existed prior to, during, and after the COVID-19 pandemic, to better understand its impact and the actions implemented by health systems, especially those related to the HWF.

The different components of the evaluation capture information from stakeholders in a variety of countries in the Region. Conclusions and recommendations aim to address issues that correspond to the whole Region or specify their scope, although it is possible that some country-specific characteristics may be missed. Findings and recommendations from this evaluation have been shared with the ERG and other stakeholders to receive feedback and get an idea of the different contexts to which they may apply.


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3. Key findings

This chapter begins with a summary of the results from the online survey and key stakeholder interviews conducted during phase 1. Information obtained from participating institutions and their contributions to the data collection process are provided in Appendix 5. The chapter then synthesizes and interprets the findings, identifying linkages with the ToC, grouping results by evaluation dimension, and integrating quantitative and qualitative evidence. It concludes with complementary findings from the country case studies.

3.1. Online survey

An online survey was conducted with all MSs and Puerto Rico, as well as representatives of PAHO and other international organizations involved in tackling HWF issues in the Region. The survey was implemented between 31 October and 5 December 2025. The results of the data collection are presented in Table 2. The response rate to the survey was 36.5%, with a final sample of 42 completed questionnaires. Of these, 29 informants were from MoHs or academic institutions, and 13 were from international organizations. The latter group included PAHO representatives and staff, as well as representatives of other international organizations. Questionnaires were received from 24 countries (69% of MSs), including six of the eight countries in which stakeholder interviews were also conducted. Completed questionnaires were received from all countries selected for stakeholder interviews, except for Colombia and Guatemala. The average completion time for the questionnaire was 15 minutes.

Table 2. Online survey data collection results

Invitations sent	115
Completed questionnaires	42
Declined to participate	2
Response rate	36.5%
Questionnaires from ministries of health and academic institutions	29
Questionnaires from international organizations	13
Countries with at least one completed questionnaire	24

3.2. Phase 1: key stakeholder (online) interviews

The interviews were conducted with representatives from MoHs, academic institutions, international organizations, and PAHO staff at the country level. At least one individual from each of the eight countries included in the evaluation was interviewed. However, in some countries (e.g., Brazil and Colombia), it was not possible to interview officials from the MoHs, which may have introduced a bias in relation to the

evaluation topics, particularly due to the lack of information on activities carried out by the MoHs. The interviews were conducted virtually, with an average duration of one hour, during the period from 17 November to 8 December 2025.

Support to enhance response rates was provided by PAHO's evaluation team. Results of the key stakeholder interview data collection are presented in Table 3.

Table 3. Key stakeholder interviews: data collection results

Invitations sent	36
Interviews accepted	19
Response rate	53%
Responses from ministries of health and academic institutions	12
Responses from international organizations	7

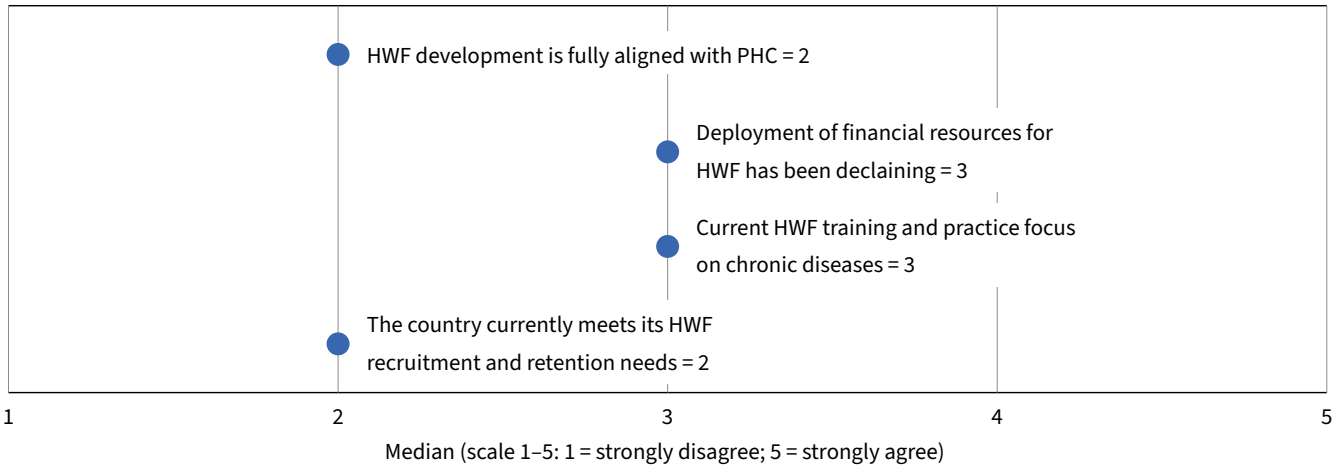
3.3. Context

The COVID-19 pandemic represented a major disruption to health systems in the Region, with the HWF being particularly affected. In the countries included in the evaluation, various impacts were identified during the critical period (2019–2022), as well as initiatives to redefine HWF policies in the post-pandemic period. In addition to the pandemic, it should be noted that some countries experienced other types of catastrophic events. For example, Jamaica was affected by two devastating hurricanes in 2024 (Beryl) and 2025 (Melissa).

HWF governance has uneven levels of development across countries. Brazil stands out for having a specialized institutional structure that integrates work and education in health, thereby facilitating policy leadership. Colombia also provides a clearer definition of the roles and responsibilities of the different actors involved. In contrast, in countries such as the Plurinational State of Bolivia, Guatemala and some Caribbean states, challenges persist, including institutional fragmentation and reliance on intersectoral agreements, which may hinder effective policy implementation.

The findings from the online survey indicate that participants identified key contextual challenges in meeting HWF recruitment and retention needs at the national and subnational levels, as well as a lack of alignment between HWF development and the primary health care model (Figure 1). No differences were observed between respondents from MoHs and academic institutions and those from international organizations in the ratings of PAHO's TC for context analysis or other dimensions. No differences were identified when analyzing either the full sample or the subset of countries that participated in the stakeholder interviews.

Figure 1. Median of responses to items related to context, as reported by online survey participants (n = 42)



Note: HWF, health workforce; PHC, primary health care.

Stakeholder interviews and case studies provide information that helps to better understand the role of contextual factors in relation to the HWF. Personnel turnover is an important organizational factor that may affect the implementation of health actions, as was mentioned in the case study in Guatemala. The impact of the pandemic manifested in different ways, including increased workloads and extended working hours, which contributed to burnout among workers, both those in direct contact with patients and those working in administrative roles. In some countries, the pandemic also led to knowledge gaps among health personnel, job frustration, family isolation, and low economic recognition. These impacts were not equally distributed across the workforce. Female health workers, particularly in nursing and primary care, experienced disproportionate workloads, emotional stress, and care burdens during and after the pandemic period. The effects of the pandemic can still be observed in the withdrawal of personnel close to retirement age and in difficulties in recruiting the workforce needed to fill these gaps. In response to this situation, MoHs have implemented programs and policies designed to address catastrophic circumstances and seek to address long-standing structural backlogs.

In most countries, immediate responses to the pandemic included the recruitment of volunteers, the hiring of foreign health workers, and the authorization of fast-track graduation for students in health-related fields to join the pandemic response in both primary care and hospital settings. However, in some countries, like Guatemala, it was reported that primary care was the most affected, since a substantial share of both human and technological resources was reallocated to hospital units.

Subsequently, countries initiated deliberate processes on how to better address catastrophic events such as pandemics. Most of the interviewees indicated that HWF development plans are currently under discussion and in the process of formulation. In the Dominican Republic and Guatemala, proposals were made to conduct HWF censuses to inform future planning in both education and labor market integration. However, no operational policy has been implemented to date. In the Dominican Republic, the MoH established a new HWF Development Directorate in 2022 to lead this process.

Some countries already have operational plans for HWF development because of the pandemic. For example, in the Plurinational State of Bolivia, a national HWF development plan integrated into a national policy was developed in response to the pandemic. In this country, HWF staffing at the primary care level has been expanded through the Intercultural Community Family Health Policy (SAFCI by its

acronym in Spanish), which aims to reduce social exclusion in health. Paraguay also has an active HWF development plan in force for the period 2020–2030. This plan was developed with the support of PAHO and identifies as one of its priorities the reduction of HWF gaps at the primary care level. Officers from the MoH and international organizations in Guyana also underlined in the case study the need for a well-developed and well-implemented HWF development plan to make progress in this area. The document review also identified different levels of formalization of HWF policies to address the effects of the COVID-19 pandemic on the HWF.

The most severe impact of the pandemic was the deaths of health workers, numbering in the thousands; however, this was not the only impact. Numerous cases of adverse emotional and psychological conditions have also been reported, with negative mental health effects among the most significant reported consequences of the pandemic. A concerning phenomenon observed during the early phase of the pandemic was the social stigmatization of health personnel, largely due to a lack of accurate information regarding transmission mechanisms.

The pandemic prompted a range of actions related to adjustments in the geographical distribution of the HWF and the training of personnel to respond to this type of contingency. In countries such as the Dominican Republic, 2022 represented a turning point, with the establishment of a national HWF policy informed by the consequences of the pandemic. Table 4 summarizes key contextual aspects related to the HWF.

Table 4. Key contextual factors related to the health workforce identified in the evaluation, with illustrative quotes from stakeholder interviews

Contextual factors	Quotes
• Coronavirus disease 2019 (COVID-19) exposed long-standing structural weaknesses in the health workforce. • Intensified workload, emotional distress, staff migration, and workforce losses. • Plans are not consistently translated into sustained structural reforms.	💬 "The pandemic affected both health professionals and administrative staff, doubling and tripling workloads and seriously impacting emotional and mental health." 💬 "There was a total overflow of demand and enormous pressure on health personnel."

3.4. Relevance and coherence

Overall, countries expressed a positive assessment of PAHO's TC on the HWF regarding its relevance and coherence with countries' needs. From the beginning, it is important to note that countries have a high level of convergence in their health priorities, as identified in the document review. Across the documents reviewed, policies consistently emphasized (1) improving HWF planning, particularly regarding geographical distribution; (2) strengthening education and competency development, with increasing emphasis on primary health care; (3) improving HWF management and working conditions; and (4) strengthening HWF information systems as a basis for more informed decision-making. International organizations also recognize these common regional priorities and acknowledge the importance of multinational actions at the regional level.

PAHO is involved in a wide range of HWF-related activities. Following the ToC, PAHO's TC activities on the HWF can be grouped into the following areas: technical assistance for the national HWF, including diagnosis of the HWF situation; development of plans of action and policies, covering design, financing, and implementation; strengthening of information systems and HWF observatories; implementation of training, incentive, teamwork, and retention strategies; and promotion of horizontal cooperation and exchange among MSs. The key activities of PAHO's TC on the HWF mentioned by interviewees are in line with the proposed ToC and include advisory support,

policy adaptation and integration, design and delivery of webinars, implementation of a virtual health campus with a focus on the HWF, assessment of HWF challenges, training in planning, development of national plans and intersectoral initiatives, and facilitation of dialogue with other countries.

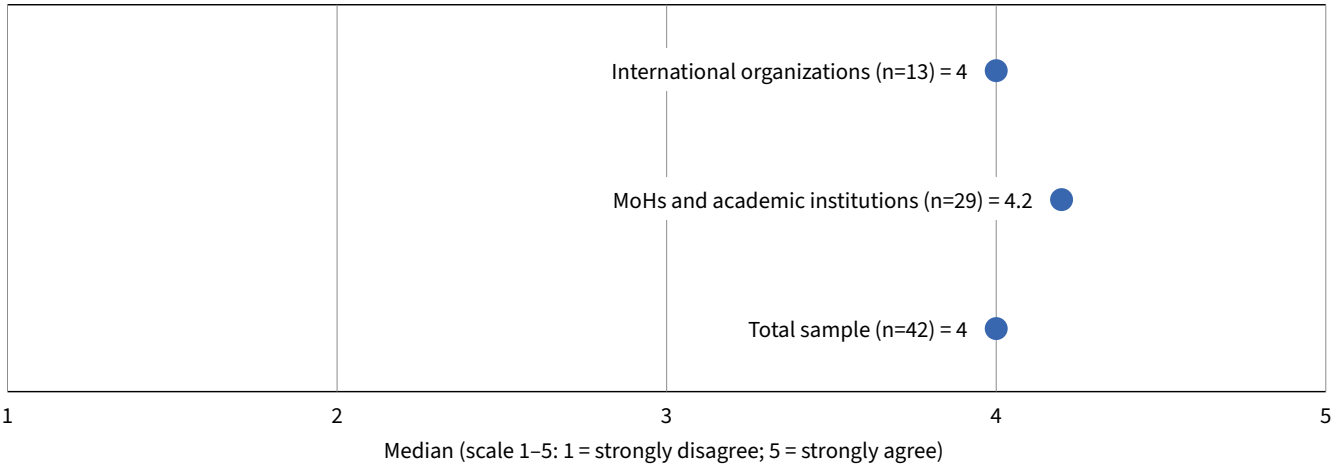
PAHO frequently supports public officials in the design and implementation of HWF plans. Stakeholders also recognized PAHO's role in promoting approaches oriented toward the attainment of the highest level of health for all, including gender considerations, intercultural adaptation of services, and strategies to improve workforce availability in underserved territories. The document review found diversity in the degree of formalization of HWF policies across countries. Some countries, like Colombia, have specific long-term policies that reflect a deliberate effort to establish regulatory stability and continuity beyond political cycles. In Guatemala and Paraguay, HWF policies continue to rely heavily on broader legal frameworks of the health sector and other areas of government. In other contexts, including Brazil, the Dominican Republic, and several Caribbean countries, the HWF is addressed primarily within sectoral strategic plans.

During the pandemic, PAHO supported governments in personnel training and the development of protocols, contributing to the strengthening and resilience of health systems. In the post-pandemic period, PAHO maintained regular meetings with MoHs to promote initiatives such as digital education and to identify options to improve the geographical distribution of the HWF, with the aim of increasing availability in rural and underserved areas. The promotion of national HWF policy formulation is aligned with PAHO's policy framework to support the achievement of the goals set out in the 2030 Agenda for Sustainable Development. In the case studies, informants identified PAHO as a key stakeholder to accelerate actions related to the HWF and overcome implementation barriers. This is an example of how PAHO's TC has responded to the needs and contexts of the countries.

The findings from the online survey indicate that, overall, stakeholders rated the relevance and coherence of PAHO's TC on the HWF at 4 on a scale from 1 to 5. This rating is consistent among respondents from MoHs and academic institutions and those from international organizations (Figure 2).

Analysis of the online survey by item within the relevance/coherence scale indicates high reported relevance and coherence across all aspects of this dimension. These include responsiveness to country priorities and capacities, consistency with expected results, promotion of PAHO health equity issues, and alignment with SDGs.

Figure 2. Median scores on the relevance/coherence scale



Note: MoH, ministry of health.

Consistent with the findings from the online survey, interview informants reported close cooperation with PAHO on training and geographical distribution issues. For example, in Jamaica, the MoH developed collaborative initiatives to establish satellite training sites in the western region of the country to support nursing training. In the Plurinational State of Bolivia, interviewees emphasized PAHO's role in the successful implementation of a node of the Virtual Campus for Public Health, while also noting the ongoing challenge of ensuring uninterrupted operation in rural areas where Internet access remains irregular. In the Dominican Republic, emphasis was placed on the development of digital competencies, while in Paraguay educational activities include in situ training, adaptation to the primary health care model, and interprofessional practice. The case study in Guyana identified the key role of PAHO's TC in the development of a hybrid nursing training program.

One topic frequently raised by government officials relates to labor market integration. In Paraguay, reference was made to the existence of a catalog of professions and specialties used for the classification of functions and salaries. In Barbados, emphasis was placed on the implementation of labor market analyses, although policies addressing the issues identified have not yet been developed. In Jamaica, reference was also made to wage adjustments implemented by the government in 2022.

Fundamental labor market issues, such as labor rights, job precariousness, and types of contractual arrangements, among others, are being diagnosed by MoHs with the collaboration of PAHO's TC. However, the correction of these issues only partially falls under the direct mandate of MoHs, as other state agencies, such as the ministries of labor or economy, share a level of responsibility. At the same time, other issues that do fall within the remit of MoHs were barely mentioned, including absenteeism, productivity, and differences between public and private institutions. Working conditions have significant implications for the performance of health personnel. The issue of migration and its impact on the labor market was also mentioned in Guyana, a country that attracts a high volume of migrants due to its economic development and the growth of its health system, but which also has significant outward migration of nurses to other countries.

Other topics promoted by PAHO, according to informants, include health equity and gender perspectives, as well as the participation of groups in situations of vulnerability, with particular emphasis on indigenous peoples. Although in Colombia the MoH's staff has already internalized these health equity issues, PAHO plays an important role in reinforcing messages through various dissemination activities, such as seminars and courses. In 2023, Brazil passed the National Program for Gender, Race, Ethnicity and Valuation of Female Workers in the Unified Health System (Programa Nacional de Equidade de Gênero, Raça e Valorização das Trabalhadoras no Sistema Único de Saúde) to promote gender and race inclusion, creating the conditions to attain the highest level of health for all within the SUS and in other government areas that collaborate with the system. In Guatemala, where approximately 45% of the population is indigenous, PAHO's role is particularly important in promoting the participation of these populations. A relevant example is the translation of materials related to family and community care into 22 indigenous languages. These actions illustrate how interculturality and health equity approaches can be operationalized within HWF policies through culturally adapted training and communication strategies. PAHO has contributed to promoting gender and health equity approaches in HWF policies in the discussions with countries in which it has collaborated on the design of HWF plans. Regarding migration, PAHO has operationalized its support by endorsing HWF training in areas where migration has reduced personnel availability, such as the training of nurses in Barbados, Guyana, and Jamaica to address shortages resulting from nurse migration. As a matter of fact, PAHO and MSs defined five strategic orientations and a road map for the ethical migration of health personnel in the Americas, with the participation of 18 countries.

Other relevant topics highlighted by informants include the alignment of HWF plans with the achievement of national, regional, and global goals, with particular emphasis on SDG 3. Most countries indicated that PAHO represents an important reference in achieving these objectives; however, one interviewee noted that the focus on national, regional, and global goals has lost visibility in recent years. Another relevant aspect mentioned was PAHO's effort to propose a comprehensive articulation of health systems and their human resources through the Integrated Health Services

Networks approach, which seeks to functionally integrate services from different institutions and levels of care. This strategy was highlighted in Brazil, the Dominican Republic, Guatemala, and Paraguay.

Finally, this dimension highlighted the alignment issue between national and local priorities. In most countries, it was reported that PAHO systematically seeks to promote such alignment. The countries that explicitly referred to this alignment were Colombia, the Dominican Republic, and Jamaica. A summary of the findings related to relevance and coherence is presented in Table 5.

Table 5. Key findings related to relevance and coherence identified in the evaluation, with illustrative quotes from stakeholder interviews

Relevance and coherence key findings	Quotes
• PAHO's technical cooperation is recognized as being aligned with national and international priorities. • Several countries have national HWF policies that are in the process of formulation or implementation. • Health equity considerations (including gender and cultural diversity and populations in situations of vulnerability) are given serious weight by PAHO and recognized as important by Member States, although their level of inclusion in national HWF agendas could be strengthened.	💬 "The policy is highly aligned with PAHO's Health Workforce 2030 framework." 💬 "Gender perspective is always incorporated into PAHO's actions."

Note: HWF, health workforce; PAHO, Pan American Health Organization.

In summary, the findings about relevance and coherence indicate that the key activities on which TC concentrates are in line with the categories proposed in the ToC and are concentrated on training and HWF distribution. Member States recognize PAHO's TC as relevant and coherent with their needs and priorities, including health equity issues such as gender and the attainment of the highest level of health for all. However, there is a need to increase cooperation in the analysis of the labor market, especially in areas where the specific needs of the countries are not fully aligned with the approach proposed by PAHO.

3.5. Effectiveness

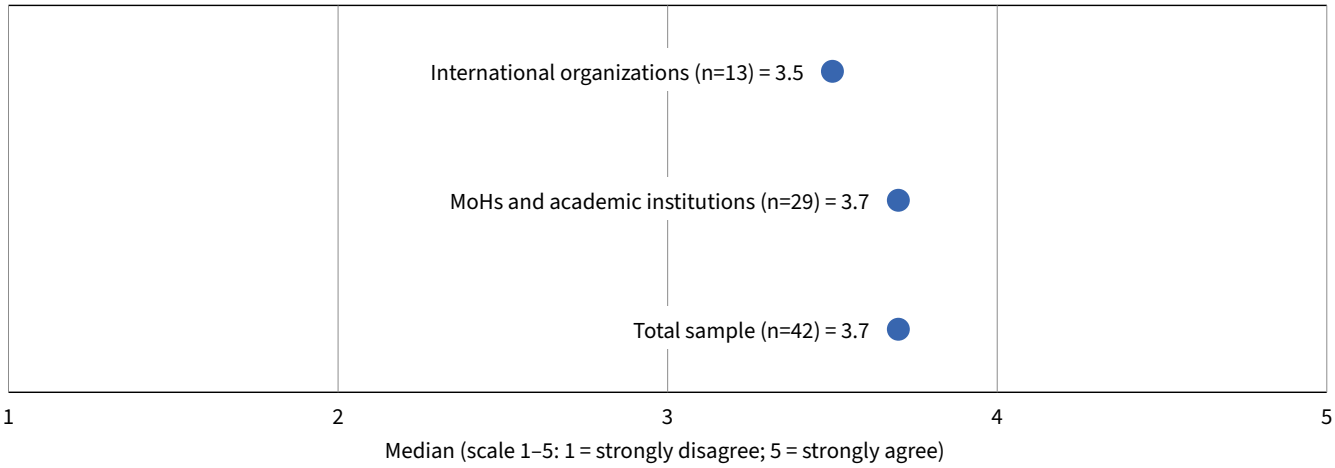
The participation of PAHO in the design, update, and operationalization of plans and programs (an activity proposed in the ToC), and the achievement of results related to HWF development, are recognized as highly positive. Based on stakeholder interviews, it was found that most of the eight countries included in the first phase of the evaluation are developing national HWF policies in which PAHO has been involved since the initial stages. The three countries in which the case studies were conducted present a mixed picture, with Brazil having well-developed plans but facing implementation challenges given the size of the country and the unequal distribution of health personnel. In Guatemala, the development process has taken too long following the consequences of the COVID-19 pandemic, partly due to the country's political instability. Guyana still lacks an HWF development plan, although PAHO has been involved since the initial assessment of the situation. Limitations in the development of HWF plans reflect the countries' administrative contexts but also implementation challenges.

Examples from other countries also illustrate the participation of PAHO in the development of HWF plans. In Jamaica, it was noted that PAHO has participated in the development of the HWF plan since the consultation phase. In the Dominican Republic, cooperation with PAHO is

recognized as "active, aligned, and decisive for institutional achievements." In fact, it was reported that, without PAHO's participation in training activities, workshop implementation, and the collection and validation of the HWF census, these initiatives would likely not have achieved the same level of results.

The findings from the online survey on the reported effectiveness of PAHO's TC are consistent with those from the stakeholder interviews. Overall, respondents reported an average score of 3.5 on a 1–5 scale for effectiveness, with similar results among respondents from MoHs and academic institutions and those from international organizations (Figure 3).

Figure 3. Median scores on the effectiveness scale



Note: MoH, ministry of health.

A more detailed analysis of the online survey indicates variations across the specific dimensions of effectiveness analyzed. In particular, PAHO's TC on the HWF was rated as more effective in areas related to the support of implementation of national policies (an activity identified in the ToC) and alignment with health system requirements, while lower scores were observed for efforts related to strengthening HWF capacity and reaching subnational levels (an output also identified in the ToC).

Overall, it is observed that PAHO develops an operational strategy by promoting situational assessments at the country level, which are then adapted and implemented according to each country's capacity. A thorough diagnosis enables countries to advance toward objectives such as the attainment of the highest level of health for all, adequate HWF staffing, and strengthened training at different levels. PAHO's role at this stage is oriented toward continuous advisory support to generate gradual changes, even if these may be slow and complex. Countries also highlighted PAHO's contribution to positioning nursing, primary care personnel, and community-based workers as strategic priorities for more resilient health systems for all.

In Paraguay, PAHO's participation was recognized in the activities described above, particularly in achieving specific objectives such as the development of HWF catalogs, the estimation of distribution gaps, the development of a national HWF policy and the implementation of an HWF situation analysis in the public sector. In Guatemala, PAHO's participation is also considered effective, with a focus on specialization planning and nursing regulations. A key structural challenge for the country is the professionalization of auxiliary personnel in remote areas, an area in which PAHO is also providing support. Key stakeholders indicated that they would welcome the

responsibility of a more active role and closer collaboration with PAHO.

Training delivered through the Virtual Campus for Public Health constitutes a key contributor to PAHO's effectiveness in strengthening HWF capacities. Survey and interview respondents consistently highlighted courses and workshops as accessible and reliable sources of knowledge that support both policy-level decision-making and service delivery practices. The Virtual Campus has achieved broad regional coverage across most MSs. However, the effectiveness of nationwide scale-up remains uneven, as limitations in digital infrastructure and technological access – particularly in rural and remote areas – continue to constrain participation and reach.

Box 1. Role of the PAHO Virtual Campus for Public Health in HWF training activities.

The PAHO Virtual Campus for Public Health constitutes an example of a highly effective intervention across the Region, and of the successful implementation of training activities at the regional level. It began operations in 2003 and experienced rapid growth after 2021. The Virtual Campus includes online courses that respond to regional and national needs in different areas of public health, both technical and operational. It is a special program under PAHO's Health Systems and Services Department and interacts with Member States through PAHO country offices. At present, it has over 5 million users and more than 11 million course registrations, indicating that many users enroll in more than one course. In the future, the Virtual Campus aims to become an active form of technical cooperation with countries, with a lifelong learning perspective, and to implement recognized microcredentials. Its main challenges are those shared by virtual education programs more broadly, particularly the growth of the virtual education market and the need for financial sustainability.

Note: PAHO, Pan American Health Organization.

In Barbados, it was stated that PAHO's role has been important in the development of health professionals, particularly in nursing. The MoH has established collaboration through biannual plans, which has provided continuity to the relationship between the two entities. PAHO also plays a key role in the regional nursing committee, contributing knowledge on professional developments in other countries from a regional perspective.

Other HWF-related issues in which PAHO is involved are country-specific, such as addressing workforce migration and ensuring that recruitment processes follow International Labour Organization and WHO ethics guidelines, thereby aiming to avoid perverse incentives that drive the workforce toward unprotected labor conditions. In these cases, the determinants exceed the regulatory capacity of health systems and institutions, requiring ongoing monitoring and, in some cases, broader approaches involving international organizations.

This positive assessment of PAHO's TC across countries does not preclude some critical issues that should be considered. For example, PAHO was recognized as having limitations in responding to specific challenges, such as migration, as the magnitude of this phenomenon exceeds the capacity of both PAHO and the MoHs to address it effectively. Another issue concerns the training of specialized personnel, particularly in Brazil, where PAHO and the MoH do not accord it the same level of priority. Another critical challenge relates to PAHO's programmatic guidelines, which may not always align with the priorities of all country contexts. A summary of the preliminary findings on effectiveness is presented in Table 6.

Table 6. Key findings related to effectiveness identified in the evaluation, with illustrative quotes from stakeholder interviews

Effectiveness key findings	Quotes
• PAHO is recognized as a key stakeholder in capacity-building, policy formulation, and HWF planning. • Successful experiences are particularly evident in primary health care, labor formalization, workforce diagnostics, and the Virtual Campus. • Limitations persist in addressing complex challenges, such as migration and rural/urban distribution imbalances. • PAHO is viewed as an effective agent in accelerating the implementation of HWF activities and overcoming implementation barriers.	💬 "Without this technical support, many of our current institutional achievements would not have been possible." 💬 "PAHO responds well but sometimes falls short in addressing very specific problems."

Note: HWF, health workforce; PAHO, Pan American Health Organization.

In summary, MSs consider PAHO's TC to be effective, especially in the development of HWF plans and in supporting the implementation and follow-up of national policies. However, it is rated as less effective in strengthening HWF capacities, addressing migration-related challenges, and reaching subnational levels. The PAHO Virtual Campus for Public Health is widely recognized as a valuable resource for training, and PAHO's role as an agent for overcoming barriers and accelerating the implementation of activities is also acknowledged.

3.6. Efficiency

Efficiency is conceptualized as the relationship between the resources mobilized (e.g., financial and human resources) and the outputs produced (e.g., number of consultations delivered and courses implemented). A policy or intervention is considered more efficient when it generates a higher level of outputs for a given level of resource input or achieves the same level of outputs with fewer resources. However, efficiency in the area of the HWF encompasses several dimensions, including (1) HWF wastage in the labor market, (2) inadequate geographical distribution, and (3) workforce productivity. These dimensions highlight that HWF challenges are not limited to the numerical availability of personnel but also involve how health workers are integrated into the labor market, distributed across levels of care and territories, and contribute to health system performance. In this regard, PAHO's TC is particularly relevant when it helps countries to strengthen their capacities for HWF planning, regulation, distribution, and incentive mechanisms, especially to consolidate primary health care and improve system efficiency. The evaluation considered two dimensions of efficiency on which informants provided their perspectives: (1) the efficiency of PAHO's TC in the use of resources and (2) HWF efficiency at the country level *(11)*.

Responses to the question about measures to promote efficiency in HWF development were diverse and somewhat ambiguous, except for the incorporation of digital technologies into service management and administration. Several informants linked efficiency to geographical distribution, particularly measures aimed at assigning health personnel to low-population-density or underserved areas. In Paraguay, it was stated that PAHO prioritizes a territorial approach combined with field accompaniment. In addition to distribution, efficiency was also associated with measures to reduce health personnel's working hours and with the integration of HWF data systems into other management systems. A relevant associated element, although mentioned by only one informant, was the possibility of adopting measures to ensure that available budgetary resources are used to generate the best possible results in terms of HWF outputs or products.

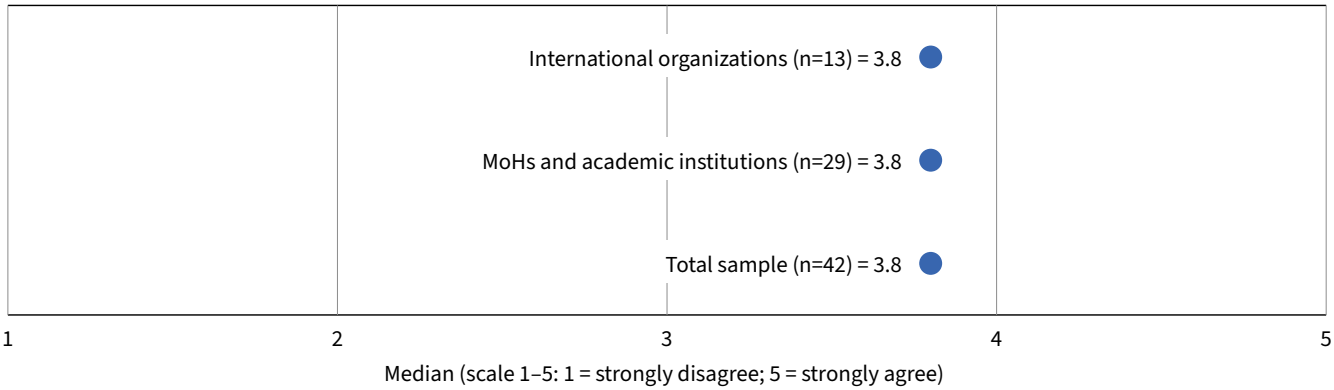
The findings from the online survey about efficiency are consistent with those from stakeholder interviews. An average score of 3.8 was observed across the efficiency scales for the full sample, as well as for respondents from MoHs and academic institutions and from international organizations (Figure 4). When analyzing the items that integrate this scale individually, higher average scores (4) were reported for the use of financial resources, the promotion of cost-effectiveness and digital innovations, contributions to health systems, and the use of resources to strengthen the HWF. In contrast, lower average scores (3) were observed for the sufficiency and relevance of financial, technical, and human resources for the HWF.

The geographical distribution of health workers is a concern across all countries, although it is generally regarded as an issue of equity rather than efficiency. Nevertheless, this challenge is structural in all countries, and the mechanisms used to address it vary. For example, Brazil has already implemented two generations of the More Doctors Program (Programa Mais Médicos) to deploy physicians to rural and remote areas. Guyana and Paraguay, in contrast, have adopted other strategies to place health personnel from different professional categories in these areas. Guatemala represents a noteworthy case, as all personnel assigned to rural and indigenous areas are required to receive intercultural training. The costs associated with each strategy vary, and Brazil can invest greater resources than other countries to prioritize the deployment of physicians to underserved areas.

Digitalization of services and the use of digital technologies were mentioned in stakeholder interviews by most informants as key elements of efficiency in HWF management. In several cases, these digitalization processes have already begun to be implemented, although full implementation is not expected in the short term. The COVID-19 pandemic represented a turning point in this process, as it required innovations at all levels of the health system. Although digitalization processes predate the pandemic, it provided a strong impetus for their development. PAHO has played a very active role in this process, especially through the training of personnel at different levels. Although digital strategies improve efficiency and expand access to training, important digital gaps persist in rural and remote areas, limiting participation in virtual education initiatives.

Country examples illustrate these broader trends. In Jamaica, it was noted that an electronic health records system has begun to be implemented. This system is designed to link user records across health centers and hospitals, enabling hospital personnel to access information on patients previously attended in primary health care units. PAHO has contributed to creating competencies within the HWF to implement these systems. In several countries, including the Dominican Republic and Paraguay, PAHO supports digital literacy programs through courses, conferences, and other formats. This offer is highly valued by stakeholders, as it enables the training of a large number of health workers with relatively limited input.

Figure 4. Median scores on the efficiency scale



Note: MoH, ministry of health.

However, countries also noted that the implementation of digital health technologies has been a lengthy process, mainly due to changes in ministerial authorities and shifting priorities. This situation has required PAHO to adapt its approaches by identifying alternative pathways and options to continue advancing digital development, which is understood as essential for system strengthening and efficiency. Another element hindering the full implementation of digital technologies is the limited awareness among health personnel of their advantages, an issue that needs to be addressed through strengthened digital education efforts.

Furthermore, PAHO mobilizes budgetary resources to support TC activities in countries. The collaborative activities referred to by informants across different countries are directly related to the use of these funds. In general, funding has increased over the past four years, although some countries do not follow this trend. Therefore, it is highly relevant that these resources generate the greatest possible results as a measure of efficiency. This relationship between investment and the volume of outputs or achievements should apply to all activities carried out through TC and not only to specific areas such as support for the use of digital technologies.

A summary of the preliminary findings related to efficiency, together with illustrative quotes from stakeholder interviews, is presented in Table 7.

Table 7. Key findings related to efficiency identified in the evaluation, with illustrative quotes from stakeholder interviews

Efficiency key findings	Quotes
• Progress is evident in the use of digital tools, virtual training, and digital literacy strategies. • Challenges remain related to data integration, limited connectivity in rural areas, and constrained operational capacity.	💬 "Now we are putting numbers on the table to show how certain decisions increase workforce gaps." 💬 "The development of digital health has been intermittent."

3.7. Sustainability

Sustainability involves different aspects that may affect the likelihood that a policy or intervention, and its effects, will remain over time. Long-term sustainability also depends on addressing structural health disparities affecting the HWF, including gender disparities, labor precariousness, occupational burnout, migration, and insufficient social protection mechanisms. Sustainability may be understood in terms of financial sustainability (the availability and allocation of resources to sustain an intervention and its effects), institutional sustainability (the institutional framework that enables sustainability), technical sustainability (the technical resources necessary to maintain the operation of an intervention), and political sustainability (the legal framework that enables sustainability). Sustainability is a key element that should be considered from the design and implementation stages of any HWF intervention. In this evaluation, sustainability issues related to the activities, outputs, and outcomes identified in the ToC were analyzed, including the development and implementation of HWF plans, the retention and distribution of health personnel, strengthened institutional capacities for HWF governance and planning, and increased political commitment and prioritization of the HWF at the national level.

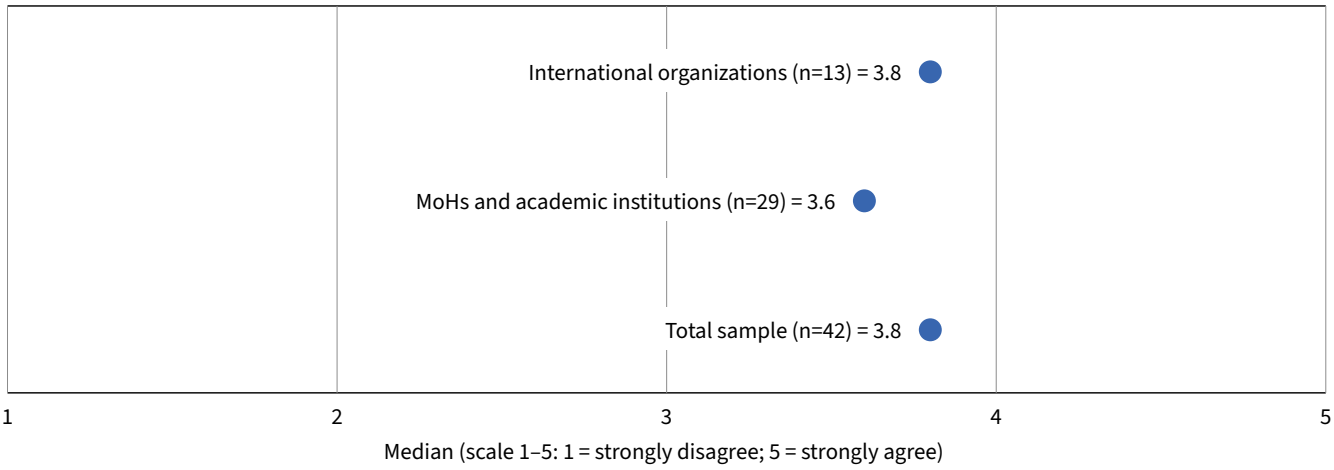
The analysis of country policies in the document review identified that countries view sustainability as a shared objective while also recognizing threats to its achievement, such as political dependence and the lack of legal frameworks. The findings related to the sustainability dimension indicate that countries in the Region recognize that sustained progress on the HWF depends on a combination of long-term planning, institutional stability, adequate financing, continuous training, solid governance, and protected working conditions for health personnel.

The online survey reported average scores between 3.6 and 3.8 on a 1–5 scale for sustainability for the full sample,

as well as for respondents from MoHs and academic institutions and from international organizations (Figure 5). However, a more detailed analysis showed that the lowest average score within this dimension (3.5) corresponded to mechanisms aimed at ensuring sustainability.

These findings suggest that sustainability should not be understood solely as a matter of long-term political commitment but also as the development of concrete institutional mechanisms that safeguard HWF policies from changes in government. These mechanisms include anchoring HWF strategies in laws, regulations, ministerial agreements, or other formal public policy instruments; establishing or strengthening technical units responsible for HWF planning and monitoring; and developing country-level systems for continuous monitoring, with clear indicators, regular reporting processes, and accountability mechanisms.

Figure 5. Median scores on the sustainability scale



Note: MoH, ministry of health.

Countries emphasized the need to project HWF development over a 10–15-year horizon, incorporating emergency preparedness and strengthening strategic profiles, particularly for nursing, which is recognized as a pillar of primary health care. The document review found that most of the documents reviewed share a medium- to long-term vision, recognizing that the training, distribution, and retention of the HWF require time and sustained planning. Sustainability emerges as a crosscutting concern across the policies reviewed, which recognize the need for stable financing, adequate technical capacities, and institutional continuity. The document review also identified persistent risks to sustainability, including political dependence, the absence of specific legal frameworks, and limited systematization of monitoring and evaluation processes.

Concerns were also expressed regarding uncertainty about the long-term impacts of current policies, particularly in Colombia, where questions were raised about whether current efforts will translate into sustainable structural outcomes. In this respect, the case studies, especially in Guatemala, highlighted concerns about sustainability in a context of high personnel turnover in leadership positions within the MoH.

Governance and political stability emerge as critical elements. In the Dominican Republic, interinstitutional agreements, regulatory capacity, and alignment with universal access to health and universal health coverage principles in accordance with national contexts and legal frameworks are highlighted as key factors for sustaining policies, particularly in the context of leadership transition.

The need to strengthen coordination with professional associations, unions, and the private sector is also recognized. In Guatemala, personnel turnover in leadership positions within the MoH is recognized as a challenge to sustainability.

Paraguay provides a social and territorial perspective on sustainability, highlighting the feminization of the workforce, gaps in social protection, pensions, and retirement systems, as well as the importance of intervening in territories with high levels of poverty and indigenous populations to reduce health disparities. Relevant advances in mental health are also documented, including the creation of community-based residencies for specialist trainees and the establishment of alliances with international organizations, supported by PAHO.

Insufficient financing remains one of the main barriers to sustainability. From the perspective of COMISCA, it is recognized that although technically viable road maps exist, there is often insufficient budgetary allocation to implement them, which limits the effective execution of recommendations. Without sustained investment in protected working conditions and workforce distribution for all, long-term HWF retention remains at risk.

Finally, PAHO's role is consistently valued as that of a technical partner, network facilitator, and articulator with other cooperation agencies to support sustainability. Informants highlighted PAHO's respectful accompaniment of national priorities, its technical support capacity, and its contribution to increasing the visibility of emerging issues such as HWF migration. The findings from the evaluation indicate that, although MSs recognize the importance of sustainability and consider it from the outset of interventions, they face challenges in the design and implementation of specific mechanisms to ensure financial and logistical sustainability. In some countries, the high turnover of personnel in leadership positions also poses a substantial threat to sustainability and leads countries to focus on short- and medium-term results without genuine long-term planning. A summary of the preliminary findings related to sustainability with illustrative quotes from stakeholder interviews is presented in Table 8.

Table 8. Key findings related to sustainability identified in the evaluation, with illustrative quotes from stakeholder interviews

Sustainability key findings	Quotes
• The sustainability of Member States' health workforce policy development is considered highly dependent on political continuity, interinstitutional governance, and stable financing. • Political continuity is related to the capacity of decision-makers to sustain complex technical decisions; interinstitutional governance affects the capacity of ministries of health to establish functional links with other ministries or agencies; and stable financing is necessary to maintain programs and achieve intermediate and long-term goals. • There is a focus on short- and medium-term results, as these are considered more likely to be achieved. • PAHO's technical cooperation has to permanently deal with the aforementioned conditions, but stakeholders acknowledge its role as an effective broker and historical guardian of data.	💬 "PAHO's support will be crucial, especially during changes of national authorities." 💬 "We do not really know how the health workforce will look in 15 years."

Note: PAHO, Pan American Health Organization.

3.8. Phase 2: case studies

In this section, key findings from the case studies are presented. Appendix 6 includes proposed dissemination materials illustrating selected findings and country-specific stories. Appendix 7 presents selected demographic, social, and economic characteristics of Brazil, Guatemala, and Guyana, the three countries in which the case studies were conducted. These indicators reflect marked differences in population size, demographic dynamics, social conditions, economic performance, and HWF composition (nurses and physicians), factors that directly influence the planning, availability, and distribution of health personnel.

The findings from phase 2 provide a deeper understanding of PAHO's TC influence on HWF policies. In general, they confirm the findings from phase 1; however, in some cases, differences in perspectives were identified according to country characteristics and the way health systems in each country are organized. In addition, a comparison of new information with the findings from phase 1 is provided, facilitating a richer understanding of the data collected throughout the evaluation.

The case studies also provide practical examples of how broad recommendations can be translated into context-specific implementation pathways and identify opportunities for PAHO's TC to enhance their effectiveness. Brazil illustrates how governance arrangements and social participation can support the institutionalization of HWF policies within a large federal system. Guatemala highlights the importance of intercultural competencies, territorial prioritization, and the continuity of technical teams in contexts characterized by institutional instability and large indigenous populations. Guyana demonstrates how hybrid training models can help address personnel shortages associated with migration and the rapid expansion of the health system. These experiences should be used not only as illustrative findings but also as operational references for adapting recommendations to different national contexts.

Key findings from the Brazil case study

Brazil's SUS presents a complex landscape with significant stakeholder involvement in decision-making, where structural HWF challenges were severely exacerbated by the COVID-19 pandemic. Currently, health workers face increasing precariousness and work overload, aggravated by unstable hiring models managed primarily by municipalities with limited resources. In addition, geographical distribution remains highly unequal, with shortages of professionals in the Amazon region and the interior of the Northeast, compared with a high concentration in the Southeast. A disorderly expansion of training programs also threatens technical quality due to the rapid growth of the private sector in education. At the same time, significant gender disparities persist. Although women make up 75% of the workforce, they continue to face wage disparities and a historical lack of recognition in technical and auxiliary roles.

Despite these barriers, Brazil is making significant progress toward universal access to health and universal health coverage, according to national contexts and laws, achieving primary care coverage for 70% of the population, relaunching the More Doctors Program with a focus on attracting Brazilian physicians, and expanding the adoption of digital health tools such as telehealth and electronic medical records. In this context, PAHO's TC serves as an indispensable catalyst for efficiency and stability. Through legal instruments such as letters of agreement, PAHO enables the MoH to implement projects with agility, helping overcome bureaucratic rigidities and facilitating its ability to execute initiatives more rapidly despite the limitations of national procurement regulations. Financial resources provided by PAHO to the country's TC efforts increased substantially between 2021 and 2024, following a long-established trajectory of fruitful collaboration. Furthermore, in the face of high political turnover among government officials and financial constraints affecting local administrations, PAHO provides institutional memory that helps safeguard the continuity of policies in the medium and long term.

The findings of the case study in Brazil are in line with those that emerged from phase 1 of the evaluation, such as HWF distribution challenges and threats to sustainability due to personnel turnover. However, the Brazil case study also highlights important challenges for PAHO's TC and for HWF development in the context of a country with a track record of major achievements in its health system, the largest economy in the Region, and a long tradition of HWF development. To capitalize on these achievements

and address the system's weaknesses, the evaluation findings underscore the need for PAHO to adopt a more assertive role. One of the major challenges is restoring the centrality of health worker management and protection as an independent area, as well as promoting the "municipalization" of TC to act directly on the front lines of care, thereby mitigating political dependence on the central government. Finally, the data collected highlight the importance of PAHO taking the lead in cutting-edge, high-level technical discussions and guiding Brazil toward, among other goals, the ethical use of artificial intelligence, the reduction of gender disparities, and the improvement of operational and working conditions for the HWF.

Key findings from the Guatemala case study

Guatemala is experiencing a structural crisis in its HWF, exacerbated by the effects of the COVID-19 pandemic. The country faces one of the most critical per capita workforce shortages in the Region, with a marked concentration of medical specialists in urban areas and a scarcity of personnel in indigenous territories. Added to this shortage is a concerning disparity in the quality of training, aggravated by the limited capacity of the Ministry of Public Health and Social Assistance to participate in the regulation of university curricula and by the persistence of outdated teaching practices. At the same time, the system faces a continued outflow of qualified workforce, reflected in the outward migration of nurses and the movement of physicians toward the private sector, driven by noncompetitive salaries, salary caps imposed by the Civil Service Law, and administrative and institutional barriers. Territorial health disparities strongly intersect with indigenous exclusion, language barriers, and unequal access to professional training opportunities.

In this highly complex environment, PAHO's TC stands as an irreplaceable pillar, unanimously valued for its technical rigor and political neutrality. PAHO's intervention has catalyzed milestones such as the development of the National Nursing Plan 2026–2031, large-scale training with intercultural relevance, and curricular innovation toward family medicine. Financial resources allocated to PAHO's TC have increased substantially over the past four years to support collaboration with HWF areas within the MoH. However, the organization's impact is constrained by local dynamics. The findings in Guatemala reveal a growing recognition of distancing from PAHO, characterized by a focus on diagnostic exercises and insufficient support for final implementation, as well as by a programmatic approach focused on specific disease programs that limits the comprehensive development of the HWF. Consequently, sustainability emerges as the greatest risk factor. Informants indicated that projects often collapse when external funding ends or in the face of constant changes in government, making them vulnerable to the state's budgetary constraints.

The Guatemala case study illustrates the situation of the HWF in countries facing vulnerability, with a substantial indigenous population and significant organizational challenges that lead to institutional fragility. To reverse this institutional fragility, the findings highlight the need for PAHO to expand its policy influence beyond the MoH, establishing strategic dialogues with the National Civil Service Office, the Ministry of Finance, and universities. In order to increase the sustainability of interventions, the proposals point toward a strategy of "legal shielding" for initiatives (elevating technical plans to government agreements) to ensure they transcend four-year electoral cycles. Finally, the evaluation's findings underscore the importance of PAHO reestablishing a permanent technical presence, ensuring that its agendas are closely aligned with the Guatemalan context, and prioritizing the dignification, professionalization, and retention of a historically vulnerable HWF.

Key findings from the Guyana case study

The landscape of the HWF in Guyana is defined by a contrast between explosive economic growth, driven by oil exploitation, which has incidentally triggered an unprecedented expansion of hospital infrastructure, and a severe crisis in the retention of the HWF, especially local nursing staff. The health system suffers from long-standing health personnel retention challenges, losing nearly 18% of its nursing professionals annually, who primarily migrate to the United Kingdom of Great Britain and Northern Ireland in search of more competitive salaries.

These migration dynamics have important gender implications, particularly in nursing professions

predominantly represented by women. This dynamic creates a critical shortage of specialists and concentrates resources in Georgetown, the capital city, marginalizing inland areas. At the institutional level, the primary challenge lies in transitioning from a traditional, reactive "staffing" administrative model toward the consolidation of a true strategic management unit for the HWF, with a short-, medium-, and long-term HWF development plan.

In this high-pressure scenario, PAHO's TC has proven to be highly relevant and effective by directly addressing the system's main constraint: training capacity and geographical barriers. Its most notable intervention is the collaborative design of a hybrid nursing training program in partnership with the WHO/PAHO Collaborating Center for Nursing Research Development at the University of São Paulo, Brazil. This model decentralized education, allowing students from remote areas to receive training without leaving their communities. The initiative aims to graduate 4000 nurses in four years, complemented by the implementation of clinical simulation laboratories. Furthermore, support for local medical graduate programs has proven to be a formidable anchor, successfully retaining 80% of graduates. The model's efficiency is so compelling that the MoH is already replicating it independently for other disciplines.

Despite its booming economic development, Guyana is a country at an early stage of HWF policy development, still lacking an HWF development plan and a specific unit in the MoH for HWF planning, as is the case in other countries in the Region. To ensure that the milestones achieved in Guyana, for example in the training of the HWF, are not undermined by future political changes or funding constraints, the findings of this evaluation underscore the need for PAHO to support the creation of a long-term unified strategic plan for the HWF. It is also necessary to involve operational leaders (such as nursing directors) in curriculum design and in the integration of mixed technical teams to strengthen local capacity and facilitate study visits to learn from other Caribbean countries. For example, with PAHO support, nursing tutors from seven Caribbean countries, including Guyana, received two in-person trainings at the University of São Paulo, Brazil, plus webinars and face-to-face activities in Guyana. Finally, targeted technical assistance is required to structure the labor market analysis and provide operational strength to the new HWF unit, ensuring that the Guyanese workforce grows at the same pace as its infrastructure.

The Guyana case study confirms the findings from phase 1 of the evaluation, such as the importance of an HWF plan, and contributes to this evaluation with three key findings: (1) the urgency of a rapid and strong response from countries and PAHO's TC to the demands generated by economic and social growth; (2) the feasibility of implementing concrete training actions (including the hybrid nursing training program) with an international perspective; and (3) the importance of continuously monitoring HWF needs and development, given that the context may continue to change dramatically in the future.

The three cases studied in phase 2 highlight a set of common aspects and others specific to each country. First, it should be noted that PAHO's TC covers a wide range of activities, seeking both to respond to country needs and to involve as many stakeholders as possible, given the available resources. In terms of differences, the evaluation shows that in Brazil the concern for promoting a gender perspective as a cross-cutting issue is much clearer in the discourse of public officials than in Guatemala or Guyana. In addition, the case studies show that, even when the issues faced by the countries are common, the approaches to addressing them differ. For example, a common issue is the unequal distribution of health personnel between urban and rural areas. While Brazil has the resources to launch a program like More Doctors to cover rural areas, neither Guatemala nor Guyana has the resources to do so, and they must therefore look for less ambitious options, for example, assigning staff with lower levels of training to these areas.

3.9. Analysis considering the theory of change

A ToC was proposed at the beginning of this evaluation and was subsequently refined throughout the evaluation process, validating its proposed elements and identifying new ones that need to be considered. The ToC guiding this evaluation is grounded in the PAHO Strategic Plan 2026–2031 *(1)* and is discussed in more detail in Appendix 4. The ToC provided a useful framework to identify the key activities conducted with the support of PAHO's TC on

the HWF, as well as its immediate outputs, outcomes, and impacts. It also enabled the interpretation of findings across the four dimensions of the evaluation, identifying whether they were related to activities, inputs, or outputs.

The ToC acknowledged as its starting point the profound inequalities that characterize the Region: fragmented and segmented health systems, inequitable distribution of health workers, weak institutional capacity, poor working conditions, the impact of migration on health systems and labor markets, gender issues, and limited political prioritization of the HWF by countries. Additional structural challenges were proposed in the first version ToC (notably, limited HWF quality assurance mechanisms, weak institutionalization of team-based care, personnel turnover in MoHs and insufficient retention capacity due to suboptimal working conditions). The ToC also recognizes that structural inequalities related to gender, ethnicity, geography, and socioeconomic conditions influence the implementation and outcomes of HWF policies across the Region. The evaluation confirmed the presence of these challenges but also identified some additional ones like the dramatic changes in socioeconomic conditions in some countries and the interdependence of countries in terms of their health challenges and HWF needs.

The central assumption of the ToC is that if countries adopt and sustain national HWF plans aligned with universal access, quality, HWF retention, and equitable distribution – with PAHO's technical and strategic support – then structural gaps can be reduced, leading to more resilient, efficient, and responsive health systems capable of addressing emergencies and the evolving needs of populations.

The rationale of this ToC is that, through concrete activities such as technical assistance, governance support, and the implementation of education, incentive, teamwork, and retention strategies, the expected short-term outcomes include the elaboration and implementation of national HWF plans, strong monitoring systems, and pilot initiatives in underserved territories. In the medium term, these efforts are expected to result in a more equitable and universal distribution of the HWF across primary health care and specialized care, strengthened institutional capacities, improved professional performance and teamwork, and health systems better prepared to respond to crises. The ultimate impact is progress toward universal health and well-being in the Americas, with resilient, equitable, and people-centered systems, and a sustainable, motivated, and well-distributed HWF that supports social and economic development and upholds the right to health for all.

The evaluation provided the opportunity to collect data and analyze the relationship between different activities, outputs, outcomes, and the final impact, which have been highlighted throughout the presentation of the findings. It was possible to collect more information related to activities, and to some extent to outputs and outcomes, but not about the impact, given the nature of this evaluation, as presented in Appendix 4. The findings suggest, following the logic of the ToC, that activities related to PAHO's TC on the HWF, especially those related to the elaboration and implementation of HWF plans and policies, supported the development of some immediate outcomes (such as the implementation of HWF plans and retention strategies). Although the evaluation generated limited information to analyze causal links across elements of the ToC, the findings also identified contributions that led to intermediate outcomes, most notably the strengthening of institutional capacities in the HWF and the increased commitment and prioritization of the HWF at the national level.

3.10. Gender and health for all intercultural considerations in health workforce policies

Across all evaluation dimensions, health equity issues such as gender, health for all, interculturality, disability, and human rights emerged as structural determinants shaping HWF availability, distribution, retention, and working conditions. Contemporary health systems demand an analysis with a gender perspective, not only as a determinant of population health but also as a structuring axis of health system performance. The health sector is highly feminized, with approximately 7 in 10 positions held by women; however, this level of participation does not automatically translate into equal opportunities in education and labor.

In the workplace, women face a double divide: they are concentrated in traditionally feminized and undervalued

professions and encounter structural barriers to advancement into leadership positions, frequently being excluded from decision-making. This is compounded by the persistent gender pay gap and the disproportionate burden of unpaid care work that women assume outside of work, directly impacting their well-being and retention within the system *(12)*.

The document review analyzed the regulatory frameworks and policies in effect in the countries of the Region to identify how governments are aiming at transitioning from welfare approaches toward strategies focused on formalization, protection against harassment, and women's leadership. Amid migration crises and staff shortages, integrating gender considerations into HWF management is essential to ensuring the sustainability and quality of care.

Regional regulations have moved toward closing wage gaps and creating violence-free environments. In Brazil, for example, current policies for 2023 prioritize ethnic and racial equity and combating job insecurity among nursing staff in the public system *(13)*. Colombia has consolidated strategic plans that integrate formal employment with specific protocols against discrimination based on gender identity and harassment *(14)*.

The assessment findings show that, in the Caribbean, countries such as Guyana and Jamaica focus their regulatory frameworks on retaining the HWF in the face of international migration; their plans seek to strengthen women's leadership in management and improve incentives for front-line staff *(15, 16)*.

For the Plurinational State of Bolivia and Guatemala, the agenda has expanded to include a profound restructuring of the HWF. In the Plurinational State of Bolivia, policies aimed at dismantling patriarchal structures are being implemented to eliminate gender hierarchies and integrate women from rural communities into the health system *(17)*. In Guatemala, the strategy focuses on empowering and integrating midwives into the national system, ensuring cultural relevance to reduce obstetric violence, and guaranteeing that these workers are protected by social security and have job security and economic incentives that formalize their historical work in rural areas *(18, 19)*.

Finally, Barbados and the Dominican Republic have updated their equality plans to include shared care leave and strengthen workplace safety, recognizing workplace violence as a critical risk to the sustainability of health services.

Faced with the aforementioned structural barriers, PAHO has consolidated its role as a technical partner in the face of the Region's political volatility. This role is recognized by the countries concerned, which identify PAHO's TC as a key actor for maintaining gender perspectives as a core component of HWF policies. Through the Action Plan for Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023, PAHO ensures the continuity of equality policies and requests that MSs report data disaggregated by sex and hierarchical level.

PAHO's intervention focuses on three key areas:

1. Professionalizing care: formalizing and improving the salary status of historically feminized roles, such as nursing and midwifery;
2. Eradication of violence: implementing protocols against hospital harassment and mitigating overload;
3. Leadership development: empowering women in senior management to ensure their participation in managerial decision-making.

PAHO emphasizes that universal health coverage requires an empowered, protected, and fairly compensated workforce, positioning the HWF as a strategic investment and ensuring that gender is not a source of vulnerability.

However, implementing an equity approach in HWF policies requires moving beyond general references to account for gender, intercultural considerations, disability, and populations in situations of vulnerability. TC should support MSs in establishing disaggregated baseline assessments, incorporating variables such as gender, occupation, hierarchical level, ethnic affiliation, territory, and other relevant dimensions, according to data availability. It should also promote equity-oriented, measurable standards, including intercultural competencies for health personnel providing care to indigenous, Afro-descendant, and migrant populations, as well as targets for parity or representation

in leadership, training, and decision-making spaces, where appropriate.

3.11. Unexpected results

The evaluation findings are consistent across the various sources of information (document review, surveys, interviews, and case studies) and with the structure proposed in the ToC. However, some unexpected results from this evaluation should be noted.

Countries have high expectations of a quantitative and qualitative increase in PAHO's TC on the HWF in the future. While the document review identified a high degree of coherence between the countries' needs and the actions proposed through PAHO's collaboration on the HWF, the extent to which countries expressed their interest in increasing collaboration with PAHO in this area is noteworthy. This was identified as an explicit request in the case studies, not only for more collaboration but also for a focus on certain technical areas such as situational analyses, policy implementation monitoring, or training.

Although it was expected that MSs would recognize the Virtual Campus for Public Health as an important resource for training the HWF, findings regarding its visibility in and use by MSs, as well as their expectations of it, were unexpected. This should be considered a clear indication of the importance of supporting and further developing the Virtual Campus for Public Health in the future, considering the changing context of virtual education.


OPS/OMS

4. Conclusions and lessons learned

This section presents the evaluation's conclusions and lessons learned, drawing together the evidence generated across the different dimensions. The traceability matrix that illustrates the linkage between the research questions, findings, conclusions, and recommendations is presented in Appendix 8.

4.1. Conclusions

1. **There is a high degree of coherence and alignment between the specific strategies promoted through PAHO's TC on the HWF and the needs, policies, and programs of MSs. However, this alignment is less evident in health equity issues that form part of PAHO's broader agenda.** Cases of strong programmatic coherence were identified in successful strategies implemented in several MSs, where PAHO's participation was closely aligned with national needs. Illustrative examples include the hybrid nursing training model in Guyana and the training of primary healthcare personnel in Paraguay. These experiences have generated important national and regional references, particularly in Guyana and Paraguay. **However, alignment remains insufficient in relation to cross-cutting priorities within PAHO's agenda**, where ministerial authorities continue to prioritize country-specific issues. Two examples are particularly relevant. First, efforts promoted through PAHO's cross-cutting agenda to advance national, regional, and global goals to achieve sustainable development have not consistently been prioritized at the same level by national authorities. Second, although gender approaches are formally included as priorities in ministerial policy and programmatic documents, these issues do not receive the same level of political and operational prioritization in practice.

2. **Countries recognize that PAHO has a great capacity for diagnosing challenges but that monitoring policy implementation, depending on the specific issue, tends to be problematic, considering that governments can reduce financial support for and commitment to the achievement of goals depending on political cycles or trends.** It is important to recognize that the implementation of policies requires the participation of a variety of stakeholders at both the national and international levels. Implementation goes beyond the design of plans and entails addressing challenges related to the capacity and stability of MS governments and institutions. In this regard, a key question is how PAHO's TC can be implemented to ensure MSs can collaborate more effectively with the Organization on policy implementation monitoring, recognizing that HWF policies must be integrated at both the macro and territorial levels within countries, as well as regionally. Countries also question whether PAHO's mandate allows the Organization to play a more active role in the formulation of specific proposals and in the implementation or monitoring of national policies. This includes supporting countries in conducting health labor market assessments, monitoring of the distribution of health personnel across territories and levels of care, strengthening HWF planning to meet the needs of primary health care, and designing incentive mechanisms aimed at improving the performance, retention, and productivity of health workers.

3. **Member States recognize the strong coordination and response capacity of PAHO's TC, which helps in achieving established objectives, despite the replacement or elimination of positions in HWF TC teams in certain countries and at the regional level.** Member States also emphasized PAHO's capacity to provide training and technical advisory support, particularly in HWF policy

development and planning, as well as its ability to convene political actors from different areas of government and facilitate coordination for the implementation of HWF-related plans and policies related to social and technological development. However, government informants also identified structural adjustments in PAHO country and regional offices as a factor affecting TC. In particular, the withdrawal of specialized HWF consultants in some countries was identified as a relevant limitation.

4. **Member States highlight the effectiveness of TC in promoting digital educational tools, particularly the use of the Virtual Campus for Public Health.** This platform performs multiple functions, including knowledge transfer, consultation, and training, while responding to the needs of public health organizations. In addition, the expansion of the Virtual Campus for Public Health, particularly since the COVID-19 pandemic, has significantly increased the ability to reach populations living in remote or hard-to-access areas, where access through conventional training modalities would otherwise be extremely costly.

5. **PAHO's TC effectively supports MSs in addressing transnational and structural challenges related to the HWF.** In areas such as the international migration of health workers, PAHO fulfills its role through knowledge transfer, facilitation of dialogue among national stakeholders, and technical advisory support for the development of innovative responses. In addition, TC maintains communication and coordination with organizations such as CARICOM, COMISCA, and MERCOSUR on these issues. This work is complemented by the participation of governmental bodies and other social sectors outside the health system, which also play an important role in promoting compliance with internationally accepted ethical guidelines governing migration flows of the HWF.

6. **Countries have high expectations of a quantitative and qualitative increase in PAHO's TC on the HWF in the future.** While the document review identified a high degree of coherence between the countries' needs and the actions proposed through PAHO's collaboration on the HWF, the extent to which countries expressed their interest in increasing collaboration with PAHO in this area is noteworthy.

7. **Technology transfer mechanisms, such as the Virtual Campus for Public Health and other digital resources, increase the efficiency of PAHO's TC on the HWF.** The evaluation found that informants primarily understand efficiency in relation to the support PAHO provides to MoHs, enabling them to improve processes in terms of cost-effectiveness. At the same time, the concept of efficiency within PAHO's technology transfer program remains difficult for MoH informants to assess, mainly due to the absence of tools for evaluating resource utilization in relation to program achievements. Despite these limitations, informants identified several areas that must be strengthened to increase the efficiency of PAHO's technology transfer program in the context of the HWF, particularly investments in the implementation and use by healthcare workers of digital technologies in both hospital settings and primary health care. According to the findings, this type of investment expands coverage for populations living in remote and hard-to-access areas and increases access through tools such as electronic medical records and digital consultations. The implementation of technology transfer must incorporate clear ethical safeguards to protect confidentiality.

8. **Political instability reduces the sustainability of TC actions on the HWF and, in some cases, limits the ability to develop long-term planning scenarios.** There is broad consensus that sustainability depends on multiple factors, including contextual conditions such as epidemics and economic instability, as well as the internal structure of MoHs and the high turnover of personnel in leadership positions, as specifically identified in the Guatemala case study. Informants consistently identified the constant rotation of officials within ministries as a critical problem, as it interrupts policy development and forces processes to restart under each new administration. This dynamic creates significant barriers to the continuity of TC and of programs implemented in collaboration with MoHs.

9. **Historical challenges related to HWF distribution persist, particularly in highly vulnerable areas, and there are currently no solution proposals applicable across the entire Region.** These long-standing structural challenges, such as the unequal distribution of health personnel, require urgent responses. However, no single approach can be applied to all MSs, given their geographical characteristics and population distribution patterns. In this context, support provided through PAHO's TC for the implementation of innovative strategies has been considered invaluable, as reported in Guyana and Paraguay.

MoHs face major difficulties in designing and implementing policies capable of improving geographical distribution and responding to care needs, particularly for populations in situations of vulnerability. These difficulties are driven not only by existing financial constraints but also by the absence of distribution models adapted to national and subnational realities. Therefore, the options for developing strategies in each country must be financially viable.

10. **Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves.** An example of how TC seeks to address this dual challenge can be observed in Paraguay, where strategies focused on rural areas and areas with higher levels of poverty have been promoted to bring health services closer to the population, while also promoting the formalization and on-the-job training of personnel assigned to those territories.

11. **The political, economic, social, and health context of the Region is generating new challenges and strategic priorities for HWF development and for the role of TC.** Emerging issues are becoming increasingly visible, particularly the erosion of protected working conditions, in which the contribution of MoHs and of PAHO itself has remained limited. Another emerging issue in which PAHO's TC has shown limited involvement is support for the formulation of public policies related to the incorporation of the HWF into the private sector, both in education and employment. This situation is clearly observed in Guyana, where a rapid expansion of private sector health services and the attraction of both national and international health workers have taken place without adequate regulation.

4.2. Lessons learned

1. **The greatest value of TC is realized when support extends beyond diagnosis and HWF policy development to include implementation support, improved management, and sustained follow-up at country level.** This is a key lesson learned from this evaluation, reflecting the importance of comprehensive TC.

2. **When TC combines analytical support with implementation accompaniment, it is more likely to be recognized as relevant and effective by MSs than when it remains focused primarily on diagnostics and planning.** PAHO's expertise in HWF issues is widely recognized for its technical rigor and political neutrality in capacity-strengthening and in the formulation of plans and programs. MoHs frequently seek support that goes beyond diagnostics and translates into direct assistance for implementing solutions to specific and urgent challenges; however, this type of support remains limited.

3. **Regional recommendations generate greater uptake when they are accompanied by context-specific implementation pathways that reflect country capacities, governance arrangements, and labor market realities.**

4. **Addressing HWF distribution challenges requires combining robust situational analysis with solutions tailored to national and subnational contexts, rather than relying on standardized approaches.** One example is the unequal distribution of health services, a structural problem across countries due to the profound socioeconomic gaps present throughout the Region. Based on an initial diagnosis, Brazil implemented a strategy focused on assigning foreign physicians to underserved areas. However, experience demonstrated the need to revise the initial approach, and Brazil introduced important adjustments in 2023. The current version of the strategy prioritizes the recruitment of Brazilian physicians through a different incentive scheme. In Paraguay, efforts have focused on training personnel with different professional and technical backgrounds to expand primary health care in the country's most remote areas, also based on situational analysis.

5. **Challenges that are driven by regional labor markets, such as HWF migration, cannot be effectively addressed through country-level actions alone and require coordinated regional responses.** Evidence from the evaluation shows that countries have very limited instruments to prevent the outflow of health workers when acting individually, making a regional perspective essential for addressing this challenge. Although English-speaking Caribbean countries remain the most affected, migration flows are also beginning to intensify in Spanish-speaking countries. Subregional coordination bodies such as CARICOM and COMISCA are working on the development of policies that could contribute to addressing this problem, with support from PAHO's TC.

6. **Digital solutions can significantly expand the reach and efficiency of TC, but their long-term value depends on investments in connectivity, digital literacy, and**

institutional sustainability. The implementation of digital innovations supported by PAHO, such as the Virtual Campus for Public Health and digital literacy programs, is highly valued by MoHs and contributes to improving the efficiency and cost-effectiveness of health systems. Expanding coverage is therefore essential to ensure that health workers have access to these tools and the information they provide. In the coming years, overcoming gaps in technological infrastructure and connectivity in rural areas will be critical to ensure that investments in digital technologies are accompanied by innovative education and digital literacy programs. At the same time, strategies must be developed to ensure the continuity of these projects during political transitions, to which they remain highly sensitive.

7. **The sustainability of HWF reforms depends as much on institutional and political continuity as on technical quality; embedding reforms in laws, regulations, and stable institutional structures helps protect gains during political transitions.** In some MSs, PAHO's TC has provided a vital source of institutional continuity, helping safeguard policies in the medium and long term despite the high turnover of personnel in government positions. This vulnerability to political instability causes program implementation to stall and forces processes to restart under new administrations. Experience has demonstrated the effectiveness of concrete actions to mitigate this vulnerability, including the establishment of **legal safeguards**, elevating technical plans to the level of laws or regulations, and creating autonomous strategic management units capable of ensuring that initiatives transcend government cycles.

8. **When demand for TC exceeds available resources, impact can be enhanced through strategic prioritization, differentiated cooperation modalities, and stronger targeting of support to areas of greatest added value.** Over the past six years, the allocation of funds for HWF-related TC has increased moderately; however, countries continue to demand additional support, and these increases have not been sufficient to meet those needs. The allocation of resources for HWF-related TC does not follow a uniform pattern across all countries. Therefore, in addition to addressing the most pressing needs, it is important to apply efficiency criteria to resource allocation at both the regional and country levels. This entails developing resource allocation plans linked to specific projects and their expected outputs.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5. Recommendations

For the implementation of the following package of recommendations, it is important to ensure that PAHO's TC involves stakeholders from both the central level and country offices throughout the different stages of design, dissemination, and eventual implementation. National and subnational stakeholders should also be engaged, including government institutions, the private sector, professional associations, and other relevant stakeholders in each country. For certain issues, such as migration, regional and subregional actors should play an important role in these processes.

In general, the recommendations can begin to be implemented in the short term, with continued action over the medium and long term. However, institutional and resource constraints must be taken into account. These constraints will require PAHO's TC, in coordination with each country, to establish a level of priority for each recommendation and to incorporate efficiency mechanisms to generate the best possible outcomes in a fragile financial environment.

1. **Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining PAHO's comparative advantage in diagnostics, planning, and policy development.**

- PAHO's TC should support the design and implementation of governance models. This support must include the development of disaggregated HWF baseline assessments by gender, occupation, hierarchical level, ethnic affiliation, territory, and other relevant variables, subject to data availability, the definition of intercultural competency standards for the education and practice of the HWF, and the establishment of targets for parity or representation in leadership, training, and decision-making spaces, where applicable.
- PAHO must work with countries to design, promote and support implementation mechanisms adapted to the specific needs of each system as well as to address issues of global relevance to advance national, regional, and global goals, having in mind the achievement of sustainable development and the integration of gender approaches in health.

2. **Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.**

- Health workforce TC in MSs must increase support of current efforts to analyze labor market conditions, using strategies that enable information to be continuously updated and analyzed over time. PAHO's TC must, therefore, initially support the monitoring of these dynamics through the identification of existing information sources within health services and subsequently provide support for their integration and analysis.
- Health workforce governance must ensure the participation of all relevant stakeholders from public, social security, and private sector institutions within each country and incorporating career pathway frameworks that support HWF recruitment, retention, and development. Such governance models should facilitate planning processes involving both educational and health institutions, while aligning with and advancing national, regional, and global priorities.

These actions can be complemented by the following subactions:

- Promote dialogue with health authorities at different administrative levels on strategies to address identified challenges, including contracting models capable of maintaining protected working conditions.
- Strengthen information transfer by expanding dissemination and engagement with a broader range of stakeholders.
- Advance the design and dissemination of HWF governance models incorporating public, private, and professional representative actors.
- Support efforts to address the unequal geographical distribution of health personnel, particularly in countries with a federal government where local authorities often have significant decision-making power.
- Propose retention strategy options for health personnel in rural and indigenous areas, such as digitalization, training, involvement of non-medical personnel, monetary and nonmonetary incentives, intercultural training, career development plans, and co-responsibility of local authorities.

3. **Strengthen TC in HWF training, professional education, and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners.**

This recommendation refers to training on HWF and professional education, including TC with academic institutions (i.e., medical, nursing, and dental schools) on curriculum development and updates. Key areas for action include:

- Supporting the integration of training initiatives with each country's model of care, as well as with specific topics linked to PAHO's programmatic structure, using a cross-cutting approach and incorporating new pedagogical tools;
- Promoting training activities related to specific health challenges, coordinated in a way that provides health workers not only with technically sound knowledge but also with an understanding of the organizational context in which programs are implemented;
- Interprofessional training supported by PAHO as a key strategy for achieving greater integration of health workers across the diverse functions of health systems, including health service delivery, resource management, and the planning of activities and targets;
- Ensuring that all training initiatives reach the largest possible number of health workers using emerging technologies, so that personnel living in remote or underserved areas can access these lifelong learning resources and strengthen their competencies;
- Strengthening collaboration with academic institutions, professional associations, private institutions, and international organizations to align professional education and continuing learning opportunities with evolving health system needs, including follow-up on the design and implementation of these collaborations to disseminate their results and propose alternatives for other MSs.

4. **Strengthen regional cooperation mechanisms to address HWF migration, support evidence-informed policy dialogue, and promote ethical and sustainable workforce mobility arrangements.**

- PAHO's TC must develop new forms of support that address HWF migration-related challenges, concentrating efforts in areas where PAHO can generate the greatest added value.
- It is necessary to generate evidence on labor market characteristics and health personnel preferences related to migration to other countries, promote regional and subregional coordination to address migration-related challenges, and facilitate information-sharing with MoHs and public and private health institutions to support policy dialogue within and across countries on the impact of migration on the HWF.
- It is also important for PAHO's TC to support the regulatory mapping of divergent licensing requirements across CARICOM and SICA, as well as providing technical assistance to extend free

movement regimes for nurses and community health workers.

- PAHO should encourage systems' actors to establish ethical recruitment agreements and implement these recommendations.

5. **Support MSs in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems.**

- In view of the potential development of future pandemics, it is essential to begin immediately or, where efforts are already under way, to continue the training and ensure the preparedness of personnel across health systems.
- At the same time, global and regional preparedness and response strategies linked to HWF career pathway frameworks should be developed and regularly tested before an emergency occurs.
- To achieve this, PAHO's TC must strengthen collaboration among relevant PAHO technical areas and other international organizations that possess the specialized expertise required to support large-scale training of MoH personnel.
- These efforts must ensure that the HWF is prepared to respond to a potential pandemic and capable of making and implementing the best possible decisions in realistic scenarios characterized by workforce shortages.
- PAHO's TC must strengthen collaboration among MoHs, educational institutions, social security institutions, and the private sector in the implementation of these activities.
- PAHO's TC must support the analysis of options for developing a workforce capable of responding at any time to the health care needs of the population.

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Appendix 1. Terms of reference

The terms of reference presented in this appendix are reproduced with only very minor changes from the terms of reference originally issued for the evaluation. They are presented in their original form to provide full context regarding the evaluation's purpose, scope, questions, and methodological requirements.

Title	Evaluation of PAHO's Technical Cooperation for Human Resources for Health in the Americas (EHRH-FT)
Purpose	To assess the contribution of PAHO's Technical Cooperation to strengthening the Health Workforce in the Region. The evaluation focuses on results achieved, relevance, coherence with expected outcomes, efficiency, effectiveness, and sustainability of TC in HRH.
Contract type	Consultancy – Institutional contract (external evaluation firm/team)
Modality	Contracted to an independent firm/team, and with support from PAHO Evaluation
Duration	Nine months (following contract effectiveness and the commencement of work by the evaluation firm/team)
Start date	September 2025
End date	April 2026 (final report to be approved, and published, by April 2026).
Location	Remote consultancy, with the possibility for one trip to Washington, DC and one field visit.
Language(s)	Operational: English and Spanish (French and Portuguese if needed)
Commissioner	PBE Department
Evaluation manager	PAHO Evaluation

Introduction

In the Region of the Americas, many people lack access to comprehensive health services, including health promotion, disease prevention and palliative care. Countries have adopted various health system approaches to respond to this challenge. These collective experiences and the available evidence help identify guiding elements for countries to advance toward Universal Access to Health and Universal Health Coverage, according to national contexts and laws, as relevant. However, each country must define its health system and the allocation of resources according to its specific context, needs and priorities to ensure that everyone has access to comprehensive health services that are appropriate, timely, and high-quality.[1]

Ensuring Universal Access to Health and Universal Health Coverage, as well as the right to health, relies heavily on the accessibility, availability, acceptability, and quality of the health workforce (HWF). The health workforce plays a critical role in progressively overcoming geographical, economic, sociocultural, organizational, ethnic, and gender barriers so that all populations have access to comprehensive health services without discrimination.

[1] PAHO Document CD60/6.

Effective and resilient health systems depend on an adequate and qualified health workforce. However, countries in the Region face challenges related to the education, employment, distribution, retention, and performance of their health workforce. Although the development of an adequate, available, and qualified health workforce has been a priority on national, regional, and global agendas in recent decades, significant gaps remain.

Over recent decades, important policies and strategic initiatives to strengthen health systems have been formulated at national, regional, and global levels, with the participation and support of Pan American Health Organization/World Health Organization (PAHO/WHO) among other international organizations (including UN agencies, other multilateral organizations and civil society organizations).

Background

In line with the 2030 Agenda for Sustainable Development and its Goal 3 ("Ensure healthy lives and promote well-being for all at all ages"), the 2016 World Health Assembly adopted the Global Strategy on Human Resources for Health: Workforce 2030. Several policies and strategies endorsed by PAHO Member States provide guidance and recommendations for strengthening HWF. These include the Action Plan on Health and Resilience in the Americas, adopted at the Ninth Summit of the Americas in 2022, in which the Heads of State and Government of the Region committed to strengthening HWF through education, research, and other investments; the Strategy on Human Resources for Universal Access to Health and Universal Health Coverage;[2] and the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023.[3]

Additional resolutions and strategies addressing the need to strengthen HWF include the Strategy for Universal Access to Health and Universal Health Coverage[4] and the Strategy on Resilient Health Systems.[5] These policies align with the Sustainable Health Agenda for the Americas 2018–2030 and the PAHO Strategic Plan 2020–2025.

In addition, PAHO launched the Policy on the Health Workforce 2030: Strengthening Human Resources for Health to Achieve Resilient Health Systems,[6] which was approved by Member States at the 60th Directing Council in 2023. The purpose of the Policy is to provide strategic and technical guidance to Member States in developing and implementing strategies and initiatives to strengthen HWF, ensuring that the health workforce contributes to building resilient health systems.

This policy proposed priority actions to strengthen HWF and contributed to building resilient health systems, recovering public health gains eroded during the pandemic, and resuming progress toward achieving the Sustainable Development Goals by 2030. The policy proposed the following five strategic lines of action:

1. Strengthen governance and promote national policies and plans for HWF.
2. Develop and consolidate regulatory mechanisms related to HWF.
3. Strengthen the training of interprofessional teams and their integration into integrated health services networks based on primary health care.

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2 PAHO Document CSP29/10.

3 PAHO Document CD56/10, Rev. 1.

4 PAHO Document CD53/5, Rev. 25 PAHO Resolution CD55.R8.

5 PAHO Resolution CD55.R8.

6 PAHO Document CD60/6.

4. Strengthen workforce capacities to address population health priorities and support preparedness and response to public health emergencies.
5. Promote decent working conditions, protect the physical and mental health of health workers, and ensure an adequate supply of HWF through financing and regulation.

Situational analysis

The COVID-19 pandemic has accentuated the chronic shortage and uneven distribution of health workers in the Americas, revealing significant gaps in policies, strategic planning, and investment in the health workforce. [7] It also exposed the limitations of information systems in tracking the availability and distribution of health workers and the importance of digital health approaches such as telemedicine in maintaining health services. Additionally, the pandemic highlighted the need to strengthen the capacity of health workers to effectively implement evidence-based policies. Countries faced challenges in recruiting, deploying, protecting, and retaining health workers, and implemented various strategies, including the provision of personal protective equipment, economic incentives, and mental health support, to address these issues.[8]

Despite improvements in health workforce availability resulting from pandemic response measures, substantial shortages persist, primarily due to insufficient long-term investment. By the end of 2021, many countries reported significant disruptions in essential health service delivery. [9] The pandemic also accelerated the already existing migration of health workers from the Caribbean to North America and Europe, driven by better opportunities abroad and poor working conditions at home. [10] This migration trend, combined with aggressive recruitment by foreign institutions, has led to a growing shortage of health workers in the Region. Women, who constitute the majority of the health workforce, faced additional challenges during the pandemic, including increased unpaid domestic and care responsibilities and exposure to violence against women, girls, and groups in situations of vulnerability. [11,12]

In this context, PAHO aims to ensure the efficiency and effectiveness of HWF by leveraging virtual connectivity for both capacity-building of health workers and improved health service delivery while drawing on lessons learned during the pandemic. PAHO is working toward a strategic vision that encompasses its core mandates, including the progressive realization of Universal Access to Health and Universal Health Coverage and strengthening the resilience and responsiveness of health systems during public health emergencies.

Additionally, PAHO has endeavored to incorporate cross-cutting approaches, such as gender, ethnicity, human rights and disability, and to adapt the interventions to the specific geographical, political, social, cultural, and economic contexts in which it operates. It is important to recognize the success with which PAHO adapted strategies to address local health system, policy, and HWF challenges, as well as cross-cutting priorities.

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Objectives and purpose

The purpose of the evaluation is to assess the relevance and coherence of PAHO's technical cooperation (TC) in strengthening HWF in the Region with the expected outcomes defined in PAHO's Strategic Plan, [13] its mandates, and contributions toward achieving the Sustainable Development Goals, as well as its effectiveness, efficiency, and sustainability. The evaluation will provide insights and recommendations to strengthen future PAHO and regional HWF initiatives and policies, as well as evidence of good practices and lessons learned for the continuity of TC and the implementation of the Policy on the Health Workforce 2030.

To the extent possible, the evaluation may draw on the mid-term evaluation of PAHO's Technical Cooperation in Human Resources for Health in the Americas ("EHRH-MT"), conducted in PAHO in 2022 (internal document). The evaluation may also draw on data from the Plan of Action for HWF through the end of 2021 and also build on the **prospective study** conducted in 2021 by the Royal Tropical Institute (KIT), entitled *A prospective analysis of technical cooperation in human resources for health in the Americas* (internal document, will be available to the selected firm/team).

This evaluation should contribute to the following:

a. Determine the extent to which PAHO's technical cooperation has achieved its intended outcomes and impact on HWF.
b. Describe the enabling factors and key barriers influencing the effectiveness of PAHO's TC in HWF.
c. Analyze the cost-effectiveness and resource utilization associated with the implementation of HWF initiatives.
d. Evaluate the alignment of PAHO's HWF strategies and policies with the needs and priorities of Member States.
e. Assess the long-term viability and sustainability of HWF interventions and outcomes, and how past and ongoing TC efforts have contributed to laying the foundation for the implementation of the current Policy on the Health Workforce 2030.
f. Document successful strategies, lessons learned and areas for improvement to inform future TC.

Scope and approach

Scope: This **corporate and thematic evaluation** will assess PAHO's TC for the health workforce in the Americas. The evaluation will cover the period **between 2018 and 2024**. Geographically, the evaluation will cover all countries that have received PAHO's technical cooperation within that timeframe, as well as PAHO Headquarters (HQ).

Approach: The evaluation will focus on PAHO's TC in strengthening HWF in the Region and how it contributed to building resilient health systems, recovering public health gains eroded during the COVID-19 pandemic, and resuming progress toward achieving the Sustainable Development Goals by 2030.

The evaluation should be guided by the Organisation for Economic Co-operation and Development/the Development Assistance Committee (OECD/DAC) criteria and the United Nations Evaluation Group (UNEG) guidance for framing the main evaluation questions. It should also be guided by PAHO's 2021 Evaluation Policy and PAHO's Evaluation Handbook, and evaluation standards.

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[13] Particularly Outcome 1 (Access to comprehensive and quality health services) and Outcome 7 (Health workforce: adequate availability and distribution of a competent health workforce) of PAHO's Strategic Plan 2020–2025.

Evaluation questions

Relevance/coherence	**a.** To what extent does PAHO's TC in HWF address Member States' priorities, capacities and realities for the development and implementation of strategies and initiatives aimed at strengthening the health workforce (HWF) so that it can contribute to building resilient health systems? **b.** To what extent have contextual factors (political, institutional, operational, organizational, financial, and cultural) influenced Member States' adoption and implementation of TC in HWF? To what extent have the policies, programs, measures, and changes introduced by Member States, with support of PAHO's TC, been consistent with the achievement of the expected outcomes? **c.** To what extent did PAHO's TC in HWF incorporate cross-cutting approaches related to gender, ethnicity, human rights, and disability? **d.** How relevant are multisectoral partnerships for responding to the needs of health systems in countries in the Region in advancing Universal Access to Health and Universal Health Coverage? **e.** To what extent are PAHO's TC interventions in HWF aligned with the 2030 Agenda for Sustainable Development, Goal SDG 3 ("Good health and well-being": Ensure healthy lives and promote well-being for all at all ages)?
Effectiveness	**f.** To what extent has PAHO's TC in HWF supported the implementation of national policies to strengthen HWF governance in the countries of the Region? **g.** To what extent did PAHO's TC in HWF address countries' needs and priorities related to strengthening health systems and HWF? **h.** To what extent have PAHO's TC interventions contributed to strengthening HWF capacity, retention, and distribution in Member States?
Efficiency	**i.** To what extent were the resources (financial, technical, human) allocated **j.** To PAHO's TC in HWF sufficient, relevant, and adequately utilized? **k.** How effectively did PAHO balance cost-effectiveness and the use of innovative digital approaches (e.g., telemedicine and virtual training) in its technical cooperation in HWF? **l.** What evidence exists of PAHO's contribution to broader health systems strengthening efforts through HWF initiatives? **m.** To what extent did these resources contribute to strengthening HWF and building more resilient health systems in Member States?
Sustainability	**n.** What should be done differently to enhance PAHO's TC in HWF while addressing longer-term health system's needs? **o.** To what extent is PAHO's TC in HWF contributing to equitable, resilient and sustainable health systems across Member States? **p.** Which strategic actions of PAHO's TC in HWF should be maintained to continue strengthening HWF in Member States to achieve Universal Access to Health and Universal Health Coverage? **q.** What mechanisms are in place to enhance the sustainability of HWF gains achieved through PAHO's TC?

The evaluation will provide evidence-based conclusions, good practices, lessons learned and recommendations that can help inform and improve the implementation of HWF programs, the PAHO Strategic Plan 2020–2025 regional goals and the 2030 Agenda for Sustainable Development, while strengthening capacities for implementing PAHO TC in HWF.

Methodology

The evaluation will employ a mixed-methods approach, using a variety of data collection methods, including the review of primary and secondary sources of information, as well as triangulation with data from other sources.

The selected evaluation firm/team may use the mid-term evaluation (MTE) of PAHO's TC on HWF in the Americas, conducted internally by PAHO. The selected evaluation team/firm that will be selected should consider, as a methodological option, the approach and data of the MTE, before deciding the final approach, methods, tools and data deemed most suitable and adequate for this final evaluation. Methods include:

- **Desk review of policy and program documents and materials** (guidelines, technical briefings, training materials) related to HWF. The Evaluation Team may also conduct a desk review of documents available from the relevant technical department.[14]
- **Interviews and/or surveys** based on a sub-sample of the informants from the above-mentioned reports, and new key informants from the Member States and/or the PAHO HQ, as required to complement the information, confirm assumptions and validate information. The evaluation firm/team will define the structure and type of interviews (open/structured interviews, surveys, etc.) and, as required, use of information derived from the surveys carried out within the framework of the 2021 prospective study.
- **Any other method that adds evidence and useful information to the evaluation**

The work plan details the activities to be conducted during the consultancy, per phase of the process (inception, desk review, case studies,[15] synthesis) and by expert, and includes principal and secondary milestones (e.g., report delivery, ERG meetings).

Evaluation use and audience

The evaluation will provide guidance to the PAHO Director, and PAHO's EXM [Executive Management] about the future direction of HWF programs in PAHO, and guide PAHO's technical departments and units in addressing the challenges, areas for improvement, lessons learned, and good practices in PAHO's technical cooperation in HWF in the Americas.

The key users of the evaluation are PAHO senior management, HSS [Health Systems and Services] managers and managers of the different divisions at all levels of the Organization, PWRs [PAHO/WHO Representative] in countries in the Region, and relevant staff working in the health workforce at the country level and in Member States.

PAHO will publish the final evaluation report and related briefs on its media in accordance with an established dissemination plan. Additionally, PAHO will follow up on the implementation of the evaluation recommendations through an established follow-up mechanism.

Possible limitations

Some aspects may limit the conduct of the evaluation according to schedule and the expected level of quality: (1) the availability of the required document-based information and data; (2) timely access to such information and data by the Evaluation Team; (3) the more or less systematized form in which information and data may be made available; and (4) the

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[14] The Department of Health Systems and Services (HSS) moved into a new resolution approved by the Directive Committee in September 2023 on the policy on HWF, which must be examined and included in the desk review as priority.

[15] The evaluation team can propose one relevant field trip.

timely availability of interlocutors, mainly among PAHO's executives and staff, but also among personnel from the concerned ministries, and their readiness to contribute their knowledge and experience to the evaluation.

Deliverables and work plan

Phase	Deliverables	Timeframe
Inception report **Deliverable #1** **(Payment: 30%)**	Kick-off meeting with the selected firm/team, initial work plan, discussion with the evaluation team regarding required amendments to the proposal or timeline and onboarding.	September 2025
	Inception report: Maximum 20 pages excluding annexes, including the evaluation work plan with response to the ToR and proposed changes, and the following sections: • Introduction and context; purpose, objectives, and criteria • Methodology for evaluation, including: - Refined evaluation matrix, with questions/sub-questions, indicators, approach for data sources, data collection methods, and analysis. - Stakeholder analysis: who to consult and how to engage them. - Analysis of risks: methodology, limitations, and mitigation measures. - Detailed work plan/timetable - Annexes, with tools and instruments related to the evaluation matrix. - Draft intervention logic/theory of change, tested by the evaluation [team]. • Team composition and functions, with breakdown of level of effort, role of team members and external team members, if applicable. • Draft final report outline (using the PAHO evaluation report template).	September 2025 **D1**
	Presentation to the Evaluation Reference Group (**ERG1**), **and** response to comments.	Late September 2025
Data collection, analysis, and early findings	Short report on the desk review, data collection, preliminary areas of findings, proposals for subsequent tasks, and, when required, an updated work plan.	October - November 2025
	Summary of preliminary draft findings (initial findings report)	End of November 2025
	Presentation to the Evaluation Reference Group (**ERG**) (optional preliminary feedback)	December 2025

Phase	Deliverables	Timeframe
Draft evaluation report, review of draft **Deliverable #2** **(Payment: 30%)** **Final Evaluation report,** review of draft **Deliverable #3** **(Payment: 40%)**	The evaluation team may conduct feedback sessions to discuss key findings with users and discuss recommendations areas with the ERG, EXM and stakeholders.	January 2026 **D2**
	Draft report: (preliminary findings, conclusions, recommendations, shared with the Director and EXM, and key stakeholders including the ERG). Time to reflect on emerging findings and for counterparts to comment on the findings. • Brief description of the purpose and objectives of the evaluation • Description of methodology, limitations, data, and contextual factors • A chapter on good practices and lessons learned for decision-making. • **Debrief to EXM: Present key findings,** evidence-based conclusions, and areas of emerging recommendations, to PAHO's Executive Management.	
	Final report: following the PAHO Handbook and UNEG guidelines, the report has a stand-alone executive summary, findings, and evidence-based conclusions. The report incorporates ERG and Evaluation Manager comments, as needed. A 4-page executive summary, tightly drafted, and free-standing, should outline the main findings, conclusions, lessons learned, and actionable recommendations.	February 2026
	Quality assurance and validation of the final report, internally and through **ERG2**. The team/firm considers the comments from the ERG for the final report. **After approval by the PAHO Director and EXM, the final report will be published.**	March 2026 **D3 (final)**
Production and publication	**Publication of the final report.** The final report has a maximum of 50 pages, plus annexes, and a maximum 4-page executive summary. The team will collaborate with PAHO's Evaluation Team in responding to the editorial and translator queries.	April 2026
Dissemination, Management Response	**After approval by the PAHO Director and EXM, the final report will be published**, in line with PAHO's Evaluation Policy. The team will deliver short *evaluation briefs* (in English and Spanish). Coordination of key actions for publication and dissemination.	May 2026

Management and quality assurance

The evaluation is part of PAHO's 2024–2025 corporate evaluation work plan. PAHO's Director approved the final term evaluation in February 2024. The evaluation is commissioned by the Planning, Budget, and Evaluation (PBE) department and is managed by PAHO Evaluation, which will also lead the identification of an evaluation firm through a competitive procurement process. PAHO Evaluation is responsible for ensuring the quality, objectivity, and independence of the evaluation. PAHO Evaluation will review all deliverables (inception report, report drafts, final report) for compliance with the PAHO Evaluation Policy, the Evaluation Handbook, and UNEG quality standards.[16]

The evaluation will be conducted by an **external and independent firm/team**. The **firm/team** will be accountable to, report to, and maintain regular and periodic communication with PAHO Evaluation, which will support and facilitate the team's work as required. PAHO Evaluation will also be responsible for providing appropriate orientation and onboarding in PAHO's context, as well as facilitating necessary consultations.

[16] It will also have to comply with PAHO's publications standards, which include the use of Vancouver referencing style, adequate use of PAHO's language, acronyms, and visuals, and the writing of the deliverables in American English.

An **Evaluation Reference Group (ERG)** will be established to advise PAHO Evaluation and the external evaluation firm/team at key stages of the process and comment on key deliverables (draft inception report, preliminary findings and draft evaluation report). The ERG will include staff from units involved in providing technical cooperation related to health systems and services, including HWF, and health policies. The ERG can also suggest relevant documents or assist in contacting key informants. The ERG will comprise relevant department directors and unit chiefs, as well as PWRs for PAHO subregions, and will be chaired by the commissioning department. The ERG will be established in June 2025, prior to the team's start. PAHO Evaluation will serve as the ERG Secretariat and manage and coordinate the evaluation.

Quality assurance, code of conduct, and norms for evaluation in the UN system

In line with the 2021 PAHO Evaluation Policy, all evaluations in PAHO are informed by the UNEG (United Nations Evaluation Group) Norms and Standards for Evaluation (2016) and comply with the Ethical Guidelines for Evaluation. The quality of the evaluation deliverables should follow UNEG guidelines and the 2022 PAHO Evaluation Handbook. Evaluations of PAHO-supported activities must be independent, impartial, and rigorous, and evaluators and evaluation teams must model personal and professional integrity. The external team shall abide by the PAHO requirements for external contractual agreements. Evaluation team members are expected to comply with the UNEG code of conduct for evaluators throughout the process. The data collection instruments may require clearance by PAHO's Ethical Review Committee (ERC).

Evaluators and evaluation team

The team should be composed of at least two consultants, including one senior evaluator serving as Team Lead, one senior member with [a] background and experience in public health and HWF within the overall context of evaluation, preferably also in health systems strengthening and health policies, as well as one researcher or assistant to support the evaluation team, and one enumerator for the country level study, if required. Ensuring gender balance should also be a consideration in selecting the team members.

Evaluators must possess experience in planning and implementing evaluations using robust methods. Additionally, they must have a good understanding of PAHO and preferably experience in HWF. The skills and qualifications for team leaders and team members include:

Team leader (senior evaluator)

- **Qualifications and skills**
  - Master-level degree, or relevant experience equivalent, in evaluation, and health systems strengthening, social sciences, or another discipline relevant to the theme.
  - Excellent command of English and/or Spanish (Portuguese/French desirable); and writing skills in English.
  - At least **10 years** of experience in public health, or development cooperation.
  - Familiarity with working in the context in which PAHO operates (i.e., in the Americas).
  - Experience leading or conducting evaluations for UN agencies or major bilateral donor country programs, and familiarity with UNEG Norms and Standards, and ethical standards,
  - Facilitation skills, particularly for programmatic and organizational learning and virtual facilitation skills to engage effectively remotely and in person with stakeholders (desirable).

- Respect for stakeholders, partners, and beneficiaries; ethical research (including confidentiality and anonymity); flexibility, energy, resourcefulness, humility, willingness to learn and adapt on the go, and ability to resolve conflicts; and diplomacy in presenting the findings of evaluation processes.
- Strong knowledge of UNEG Norms and Standards for Evaluation, ethics and principles,
- Demonstrated track record of producing high-quality reports on time.
- Proven capacity for writing analytical reports and/or technical papers.
- Proven capacity to steer and coordinate an independent team of experts through all steps of the evaluation process, ensuring timely production of quality reports.
- Proven experience coordinating activities with stakeholders in different countries, in diverse public, private or social organizations, at different hierarchical levels, and/or across different languages and cultures.
- Proven remote work experience (remote team-working, remote conduct of interviews, remote conduct or participation in meetings, etc.).
- Proven professional experience in evaluation as Team Leader, with participation in at least three evaluations of projects, programs, policies, or public/private organizations, of which at least one is a complex (multisector, multi-country) evaluation.
- Good knowledge and proven practice of evaluation tools: log frame, Intervention Logic and/or Theory of Change, and evaluation matrix.
- Proven professional experience within public administration or linked to public administration and/or the provision of public services.
- At least five (5) years of proven professional experience in the PAHO region.
- Previous professional experience working in/with regional and/or international organizations in the health sector would be an asset.
- Knowledge of PAHO/WHO structure, organizational culture, and processes (desirable).

Health systems strengthening/health workforce specialist (senior thematic advisor)

- **Qualifications and skills**
  - Doctorate or master's degree in public health, health policy, health systems, health workforce (HWF), or a related field. Additional training in program evaluation, health economics, or organizational development is highly desirable.
  - **15+ years** of experience in health systems strengthening, with a focus on HWF in Latin America and the Caribbean.
  - Proven track record in evaluating international technical cooperation programs, preferably within or in collaboration with multilateral organizations (e.g., PAHO, WHO, World Bank).
  - Experience working with national health authorities, academic institutions, and civil society in the Americas.
  - Deep understanding of health workforce planning and governance, education and training systems for health professionals, health labor market dynamics, gender and equity issues in HWF.
  - Familiarity with PAHO's Health Workforce 2030 policy and regional HWF [policy].
  - Expertise in qualitative and quantitative evaluation methods, including theory-based and utilization-focused approaches.
  - Strong skills in data analysis, synthesis, and report writing.
  - Fluency in English and Spanish (Portuguese and/or French are a plus).
  - Demonstrated ability to work in multicultural and multilingual environments.
  - Strategic thinking and political acumen.
  - Excellent communication and stakeholder engagement skills.
  - Professional experience in the region is highly desirable.
  - Knowledge of PAHO/WHO structure, organizational culture, and processes (desirable).

Research assistant(s)

- **Qualifications and skills**
  - Master-level degree in public health preferred; bachelor's degree required.
  - Excellent command of English and Spanish (written and oral) is mandatory.
  - Proven capacity for drafting analytical reports and/or technical papers.
  - At least two (2) years of professional experience with exposure to monitoring and evaluation, public health, or health workforce (desirable).
  - Proven experience working with stakeholders in different countries, in diverse public, private, or social organizations, and/or across different languages and cultures.
  - Proven remote team-working, conduct of interviews, participation in meetings, etc.
  - Solid computer skills in the Microsoft Office Suite, including Excel
  - Experience reviewing data to determine its accuracy and synthesizing documents.
  - Experience in surveys, interviews, focus groups, or other data collection methods.
  - Part-time availability during the core time of the evaluation (inception and field phases).

Annex 1. List of documents to be considered in desk review phase

The following documents will be considered for this evaluation. After the kick-off, the PAHO technical department and PAHO Evaluation will provide relevant additional information sources.

- 2014. Sept-Oct. PAHO. Strategy for Universal Access to Health and Universal Health Coverage.
- 2015. UN Agenda 2030 Goal 3 ("Ensure healthy lives and promote well-being for all at all ages").
- 2016. WHO Assembly. Global Strategy on Health Workforce: Workforce 2030.
- 2017. July. PAHO. Strategy on Health Workforce for Universal Access to Health and Universal Health Coverage.
- 2018. PAHO. Plan of action (2018–2023) with priority objectives for each line of action.
- 2021. June. PAHO. Handbook for Monitoring the Plan of Action on Human Resources for Universal Access to Health and Universal Health Coverage 2018–2023.
- 2021. August. PAHO. Plan de acción sobre recursos humanos para el acceso universal a la salud y la cobertura universal de salud 2018–2023: informe de progreso.
- 2021. December. PAHO. A Prospective Analysis of Technical Cooperation in Health workforce in the Americas.
- 2021. Sistematización y evaluación cualitativa de las acciones de respuesta a la COVID-19 y su vinculación con el Plan de Acción de RHS 2018–2023 (Abril-Julio 2021) and Annex 1.
- 2022. Final report. Mid-term evaluation of PAHO's Technical Cooperation in Health workforce in the Americas.
- 2023. August. Policy on the Health Workforce 2030: Strengthening health workforce to achieve resilient health systems.
- 2023. Mapping of Academic and Training Programs in the Caribbean.
- 2023. Integrating Social Determinants of Health into Workforce Education.
- 2023. Guide for Rehabilitation Workforce Evaluation.
- 2023. Impact of COVID-19 on HWF and Policy Response.
- PAHO Progress Report on the HWF Action Plan in South America.
- Website of the HWF Observatory that tracks the implementation of the Plan of Action 2018 in terms of indicators: https://www.observatoriorh.com/.
- Any other technical or policy documents, project monitoring reports, evaluations, publications on the topic.

Gantt chart of the proposed evaluation timeline

Total duration (starting with contract signing in late February 2024): 7 months, with completion of the inception report by April 2025 and completion of the final report, initial sharing, validation, finalization, and publication and dissemination from September 2025, and learning from November 2025 following the management response.

Year	2025						2026				
Month	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**
Identification of evaluation team/firm, discussion, revision of expectations and ToR, final contract		X	X								
Kick-off with the selected team, relevant PAHO staff, stakeholders, key interviews at HQ/virtually		X	X								
Review of information; inception report (IR) drafts, reviews by the ERG, final IR; evaluation start (D1)			D1								
Data collection, analysis, and early findings				X	X						
Interviews, surveys, and other instruments application (virtually, and field visits, if applicable); start planning the feedback loop with users				X	X						
Short progress report; initial feedback with users					X						
Draft preliminary findings (D2) presentation						D2					
Feedback workshop (in-person/virtual)						X					
Draft reports, discussion with key stakeholders							X	X			
Quality assurance of the draft report including review by the ERG									X		
Final evaluation reports: drafts and final (D3)									X	D3	
Dissemination and learning										X	X
Evaluation phases	Procurement			Data collection			Reporting				
		Inception			Data analysis					Publish, follow up, and dissemination	

Appendix 2. Overview of the health workforce in participant countries

An initial review of the health workforce (HWF) situation in all countries of the Region was conducted when preparing the proposal for this evaluation. This information informed the selection of the countries to be included in the evaluation and is presented in Table A2.1.

Table A2.1. Health workforce situation in countries of the Region included in the evaluation

Country	Health expenditure, % of GDP	Physicians/1000 people	Nurses and midwives /1000 people
Barbados	6.3% (2022)	2.9 (2022)	3.1 (2018)
Bolivia (Plurinational State of)	7.8% (2022)	2.0 (2021)	1.8 (2021)
Brazil	9.6% (2022)	2.4 (2021)	8.8 (2021)
Colombia	7.6% (2022)	2.5 (2021)	1.4 (2021)
Dominican Republic	6.5% (2022)	2.0 (2021)	3.1 (2021)
Guatemala	6.3% (2022)	0.4 (2020)	1.3 (2020)
Jamaica	7.8% (2022)	1.3 (2017)	1.0 (2018)
Paraguay	7.7% (2022)	3.9 (2023)	1.8 (2018)

Note: GDP, gross domestic product. Years in parentheses indicate the reference year for each observation.

Source: World Bank. DataBank – World Development Indicators. Washington, D.C.: World Bank; 2026 [cited 25 April 2026]. Available from: https://databank.worldbank.org/source/world-development-indicators.

Appendix 3. Data collection tools

The data collection tools presented in this appendix are reproduced verbatim from those originally issued for the evaluation. They are presented in their original form to provide full context regarding the data collection methods.

Online survey questionnaire

Instructions: This questionnaire aims to capture your opinions about the role and performance of PAHO's technical cooperation on HWF in your country, as well as to gather information on relevant contextual factors.

Your participation is entirely voluntary. You may decline to participate or interrupt your participation at any time without any negative consequences. Your responses will be treated confidentially and used exclusively for the purpose of this evaluation.

Estimated completion time: 15–20 minutes.

Please indicate your level of agreement with each statement using the following scale:

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly agree

Your opinion is very important to us.
There are no right or wrong answers.

No.	Statement	1	2	3	4	5
Context						
1	The country is meeting its current needs in terms of HWF recruitment and retention across different territories (e.g., states, provinces) and levels of care.					
2	Current HWF training and practice are aligned with the prevailing disease burden, particularly chronic conditions such as diabetes mellitus, hypertension and heart stroke, multi-comorbidities, and maternal health.					
3	The allocation of financial resources for HWF development within the health system has been declining.					
4	There is alignment between HWF development and Primary Health Care model.					
Relevance/coherence						
5	PAHO's technical cooperation on HWF responds to my country's priorities, capacities, and contexts.					

No.	Statement	1	2	3	4	5
6	Political, institutional, financial, and cultural factors have influenced the adoption of PAHO's technical cooperation on HWF.					
7	The policies and programs supported by PAHO have been consistent with the expected results.					
8	PAHO incorporates health equity issues (interculturality, gender, ethnicity, access to health for all, disability, and human rights).					
9	PAHO's HWF interventions are aligned with the 2030 Sustainable Development Goals.					
Effectiveness						
10	PAHO has supported the implementation of national policies to strengthen HWF governance.					
11	PAHO's technical cooperation on HWF has responded to priority health system needs.					
12	PAHO's interventions have contributed to improving HWF capacity, retention, and distribution.					
13	PAHO's TC participation aims to reach subnational levels, moving toward tangible implementation and results.					
Efficiency						
14	PAHO's financial, technical, and human resources allocated to HWF have been sufficient and relevant.					
15	PAHO has promoted the efficient use of MOH resources invested in the implementation of HWF policies.					
16	PAHO has balanced cost-effectiveness with the use of digital innovations (e.g., virtual training, especially the PAHO virtual campus).					
17	PAHO has contributed to strengthening health systems through HWF-related initiatives.					
18	The resources used have contributed to strengthening HWF and to building more resilient health systems.					
Sustainability						
19	PAHO's TC on HWF is designed, from the outset, to support the scalability of HWF policies.					
20	Adjustments are needed to improve PAHO's technical cooperation on HWF in order to address long-term needs.					
21	PAHO's technical cooperation on HWF contributes to more equitable, resilient, and sustainable health systems.					
22	PAHO's strategic actions on HWF should continue to focus on the same priority areas in the future.					
23	Mechanisms are in place to ensure the sustainability of HWF achievements supported by PAHO.					

Interview guide for phase 1

Dear Colleague,

The Pan American Health Organization (PAHO) is conducting an independent external evaluation to assess the influence of its technical cooperation in health workforce (HWF) across countries in the region over the past six years. To this end, PAHO has commissioned a team of evaluators led by Dr. Bernardo Hernández-Prado.

Dr. Hernández-Prado's team has selected 8 countries (Guatemala, Dominican Republic, Jamaica, Barbados, Paraguay, Colombia, Bolivia, and Brazil) where interviews are being conducted with Ministries of health officials and other key stakeholders involved in human resources for health-related areas.

The semi-structured interviews will be held virtually via Zoom and are expected to last between 45 and 60 minutes, between November 10 and 21, 2025. We would be very grateful if you could accept the invitation to share your perspectives and insights on PAHO's technical cooperation in HWF and related programs.

INFORMED CONSENT:

NOTE TO THE INTERVIEWER: IT IS POSSIBLE THAT THE INFORMANT HAS ALREADY RECEIVED AND FILLED OUT THE INFORMED CONSENT. CONFIRM IF THIS IS THE CASE OR IF APPLICABLE, REQUEST CONSENT WITH THE SUGGESTED TEXT BELOW.

If you are available and interested, I would like to provide you with more information and request your informed consent.

This interview will be conducted in accordance with the ethical principles outlined in the Declaration of Helsinki of June 1964, which ensure the protection of participants' identity and the confidentiality of the information they provide.

Participation is entirely voluntary, and you may decline to answer any question or end the interview at any time.

Based on these principles, the information collected will be used exclusively for this evaluation, with the purpose of providing inputs to PAHO to strengthen its HWF policy and cooperation strategies in the Region. The information obtained will be safeguarded and protected by the evaluation team. Participation is entirely voluntary, and you may decline to answer any question or end the interview at any time.

We request your consent to record the interview (audio and/or video), which will allow the evaluation team to ensure accuracy of the information and conduct a more comprehensive analysis.

General Information:

- Gender
- Institutional position
- Time in current position

Questions:

Context

1. What effects did the COVID-19 pandemic have on HWF in your country? What is the current HWF situation in the post-pandemic period?
2. Does the Ministry of Health have a national HWF development plan? Could you point out its main components?
3. In your view, has the Ministry's HWF policy achieved the expected results in the last 6 years?
4. How would you assess PAHO's overall cooperation in HWF policy in your country?

Relevance/coherence

5. Has PAHO been involved in the development process of this HWF plan and its implementation?
6. What kind of activities have you implemented jointly with PAHO under this the Plan?
7. Do PAHO's suggestions and/or recommendations incorporate areas such as training, workforce integration, equitable geographic distribution, and both national and sub-national priorities?
8. Does PAHO promote/support a perspective of equity and inclusion of vulnerable populations?
9. Are PAHO's recommendations aligned with the Sustainable Development Goals (SDGs)?

Effectiveness

10. In your opinion, does PAHO support an HWF policy that involves both national and local levels of government? Why?
11. Do PAHO's initiatives respond to the requirements/needs and priorities of your country's health system, particularly in the post-pandemic context?

Efficiency

12. To what extent do you consider PAHO's efforts to support HWF policy development efficient?
13. Does the HWF policy integrate the use of digital tools and technologies? How has PAHO supported this aspect?

Sustainability

14. Does the HWF policy include short-, medium- and long-term actions? What is PAHO's role and vision regarding sustainability?
15. How do PAHO's recommendations contribute to the achievement of universal health coverage (UHC)?
16. What recommendations would you give to PAHO to enhance the impact of its cooperation in HWF policy development in your country?
17. Is there anything else you would like to share about the HWF situation in your country, the region and PAHO's technical collaboration in this area?

We sincerely appreciate your time and valuable insights. If necessary, may we contact you again to clarify or complement some of the information discussed today?

Consent letter – phase 1 interviews

Dear Colleague,

A team of international consultants is conducting an evaluation of the technical cooperation provided by the Pan American Health Organization (PAHO) regarding Health Workforce (HWF) policies in countries across the region.

We are inviting a group of officials from the Ministries of Health in 8 countries of the region, as well as other stakeholders in the field of health workforce, to participate in a series of interviews via Zoom as part of this evaluation.

These interviews are conducted in accordance with the ethical principles for research outlined in the Declaration of Helsinki of June 1964. This means that all research participants will have their identity and the information they provide protected, and no form of pressure will be applied to obtain such information.

In line with these principles, the sole purpose of the requested interview is to gather information that will serve as input for PAHO to review its health workforce policies in countries of the region. All information collected will be stored and protected by the evaluation team.

We request your written informed consent to conduct the interview, as well as to record it in audio and video format. This is intended to ensure the reliability of the information obtained, enable in-depth analysis of the accounts provided, and guarantee comparability across countries. You may stop the interview at any time you wish, without being required to provide any explanation to the interviewers, and this decision will not result in any negative consequences for you.

Should you have any questions regarding this request, you may contact Dr. Bernardo Hernández Prado via email at evaluacion.rhs@gmail.com.

I have received information about the objectives and methods of the evaluation, and I hereby give my consent to participate in an interview as part of this process.

Name _____

Sign _____

Date _____

Evaluation of PAHO's Technical Cooperation in Human Resources for Health Interview guide for phase 2

Introduction and obtaining informed consent

Dear Colleague:

The Pan American Health Organization (PAHO) is evaluating the impact of its technical cooperation (TC) on human resources for health in the countries of the region over the past six years. To this end, it has hired a group of consultants led by Dr. Bernardo Hernández Prado.

Dr. Hernández Prado's team has selected three countries to conduct in situ case studies (Brazil, Guyana, and Guatemala) and within them, they seek to contact various people related to the development, planning, and/or regulation of human resources for health, in order to conduct semi-structured interviews to learn their opinions regarding the situation of human resources for health and PAHO's TC in this area.

The duration of the interview is estimated to be between 60 minutes (1 hour) and 90 minutes (one hour and thirty minutes).

We would be very grateful if you could accept our invitation to speak with the evaluation team about topics that are relevant to the development of human resources in health in your country and in the region.

INTERVIEWER: THE INFORMANT MAY HAVE ALREADY RECEIVED AND COMPLETED THE INFORMED CONSENT FORM. PLEASE CONFIRM IF THIS IS THE CASE, OR IF NECESSARY, REQUEST CONSENT USING THE SUGGESTED TEXT BELOW.

If you are interested and available, I would like to give you more information and request your informed consent.

The execution of these interviews is based on the principles of research ethics set forth in the Declaration of Helsinki of June 1964. This implies that any research subject must be protected in terms of their identity and the information they provide and will not be subjected to any pressure to obtain such information.

Based on these principles, the requested interview has the sole purpose of gathering information to provide input to PAHO for reviewing its HWF policy in the countries of the region. The information obtained will be safeguarded and protected by the evaluation team.

We request your written informed consent to conduct the interview and to record it in audio and video in order to obtain reliable information and conduct an in-depth analysis of the testimonies, as well as to ensure comparability between countries. I will now read to you the text of the informed consent form, which clarifies that your participation is voluntary and that the information will be handled confidentially.

INTERVIEWER, PLEASE READ THE INFORMED CONSENT LETTER

Do you have any questions about this assessment or the interview?

Would you be willing to participate in the interview?

IF THE INTERVIEWEE AGREES, REQUEST THEIR SIGNATURE ON THE REQUEST TO BEGIN THE RECORDING AND INTERVIEW

General Data:

- Gender
- Institutional Position
- Length in Position

Questions:

Context

1. What effects did the COVID-19 pandemic have on the HWF in your country? What is the current situation of the HWF in the post-pandemic period?
2. What would you say are the three main structural challenges facing HWF in your country today?
3. Are there some other factors, such as migration and the labor market situation, that particularly affect the HWF situation in your country or region?
4. Does the Ministry of Health have an HWF development plan? Could you outline its main components? If the plan doesn't exist, could you tell me if there are any initiatives for its development?
5. From your point of view, has the human resources policy of the Ministry of Health generated the expected changes in the last 6 years?
6. How do you generally assess PAHO's cooperation in HWF policy in your country?

Relevance/coherence

7. What type of activities have been carried out in conjunction with PAHO for the implementation of the National Development Plan for HWF? (INTERVIEWER, THIS DEPENDS ON THE EXISTENCE OF A HWF PLAN IN THE COUNTRY)
8. What types of strategies has your country promoted in conjunction with PAHO to incorporate actions related to training, job placement, staff retention, and equity in geographical distribution? (Can you provide examples?)
9. Do you consider that the topics promoted by PAHO address both a regional agenda and the specific needs of the country?
10. PAHO promotes differential approaches in relation to health equity issues such as gender, ethnicity, territory, and rights?
11. What is the relationship between PAHO recommendations and the achievement of universal health coverage?
12. Are PAHO recommendations aligned with the achievement of the Sustainable Development Goals?

Effectiveness

13. In general, how effective has PAHO TC been in addressing HWF problems in your country? INTERVIEWER, YOU CAN USE THE FOLLOWING QUESTIONS IF THE INTERVIEWEE IS NOT SPECIFIC IN THEIR ANSWER
    a. Does PAHO's TC help in achieving the goals and objectives in the field of HWF?
    b. Do the actions proposed by PAHO contribute to solving the problems of HWF? Yes, No. This is attributable to problems in the design or implementation of the actions, whether by PAHO, the country, or both?
14. What can be done to make PAHO TC in HWF more effective in the country or region?

Efficiency

If we think of efficiency as the best relationship between the allocation/management of HWF and the achievement of a greater volume of products generated (health services)

15. To what extent have PAHO's efforts supported the development of an HWF policy taking this criterion into account? Identify some differences with and without the PAHO TC?

16. Are there strategies that aim to improve service production through the allocation, training, or management of human health personnel in health units, municipalities, or states? (Give one example)
17. Does the HWF policy incorporate the current availability of digital resources? How does PAHO support this component?

Sustainability of HWF achievements with PAHO support

18. Have short-, medium-, and long-term actions been planned for PAHO's technical cooperation with the Ministry of Health? Explain.
19. Do the actions proposed by PAHO take sustainability into account from their initial planning, considering strategies for the country to take ownership of the actions developed and continue developing them in the future? Can you give an example?
20. Which national actors are key to sustaining these achievements in the future?
21. What risks could affect that sustainability (political, financial, institutional)?
22. To what extent does the post-pandemic context, or future scenarios in the country and the health system, affect the sustainability of actions in the area of human health and social care? Can you give an example where the context increases or decreases the likelihood of sustainability?
23. What would you recommend to PAHO to ensure that its participation in the development of the HWF policy in the country has a greater impact?
24. In your opinion, what would be the most relevant areas for strengthening PAHO's technical cooperation in HWF in your country in the future and achieving sustainability?
25. Is there anything else you would like to comment about HWF in your country/region, HWF training, and PAHO's technical collaboration?

Thank you for your time and interest in answering the questions we asked you.

If there are any doubts or if we need to complete information from the interview, can we contact you for further information?

Evaluation of the Technical Cooperation of PAHO on Health Workforce (HWF) Consent letter for case study interviews

Dear Colleague,

The Pan American Health Organization (PAHO) has commissioned an independent external evaluation of its technical cooperation in health workforce (HWF), with a particular focus on support provided to countries in the design and implementation of HWF policies.

A core component of this evaluation is the conduct of three country case studies in Brazil, Guyana, and Guatemala. As part of these case studies, key informant interviews (KIIs) will be carried out with representatives from government institutions, academia, civil society organizations, and international organizations.

The execution of these interviews is based on the principles of research ethics outlined in the Declaration of Helsinki of June 1964. This means that any research subject must be protected in terms of their identity and the information they provide, and will not be subjected to any pressure to obtain such information.

Based on these principles, the requested interview has the sole purpose of gathering information to provide input to PAHO for reviewing its HWF policy in the countries of the region. The information obtained will be handled with strict confidentiality. This information will be safeguarded and protected by the evaluation team.

We request your written informed consent to audio-record the interview. The recording is used exclusively to ensure accuracy in analysis and comparability across countries and will not be shared beyond the evaluation team. You may decline to answer any question or stop the interview at any time, without any consequence.

For any questions regarding this application, you can contact Dr. Bernardo Hernández Prado at evaluacion.rhs@gmail.com.

I have received information about the evaluation objectives and methods, and I consent to participate in an interview as part of this process.

Name: _____

Signature: _____

Date: _____

Appendix 4. Theory of change

As mentioned in Chapter 3, a theory of change (ToC) was proposed at the beginning of this evaluation. This ToC was reconstructed and adapted from an existing ToC and results framework embedded in the Strategic Plan 2026–2031 of the Pan American Health Organization (PAHO). Throughout the evaluation process, new elements requiring consideration were identified. This appendix includes more details about the rationale of the ToC and the adjustments made to it in light of the evaluation findings.

The ToC identifies as a structural problem the persistent inequalities in the health workforce (HWF) across the Americas, such as unequal distribution, poor working conditions, limited retention capacity, weak governance, low HWF quality, lack of team-based care, and insufficient political prioritization of the HWF in the countries' health agendas. It is proposed that these problems constrain the progress toward universal health coverage, equity in access, and system resilience.

The ToC uses the following starting points:

- Framework: PAHO Strategic Plan 2026–2031, under the motto "Together toward a Healthier Americas for All";
- Strategic axis: objective 5, prioritizing governance, leadership, transparency, and accountability;
- PAHO tools: differentiated technical cooperation, regional evidence generation, HWF tracking tools (e.g., HWF observatories), educational tools and platforms (e.g., the Virtual Campus for Public Health), and health information systems;
- Country context: eight selected countries included in phase 1 of the evaluation, and three countries selected for the conduct of case studies, representing the Region's geographical, economic, and institutional diversity.

The transformational assumption of this ToC is that if PAHO strengthens national capacities through adapted technical cooperation, comparative evidence, and shared governance – and if countries develop and adopt national HWF plans aligned with access to health for all, universality, quality, retention, and fair distribution – then HWF governance and allocation will improve, enabling countries to move toward resilient systems that ensure universal access and equitable coverage. A summary of this ToC is presented in Figure A4.1, including refinements derived from this evaluation. This figure highlights in yellow the components for which the ToC provides more detailed information that was used in the analysis.

Figure A4.1. Summary of the theory of change

Structural problem: Persistent inequalities in HRH across the Americas.

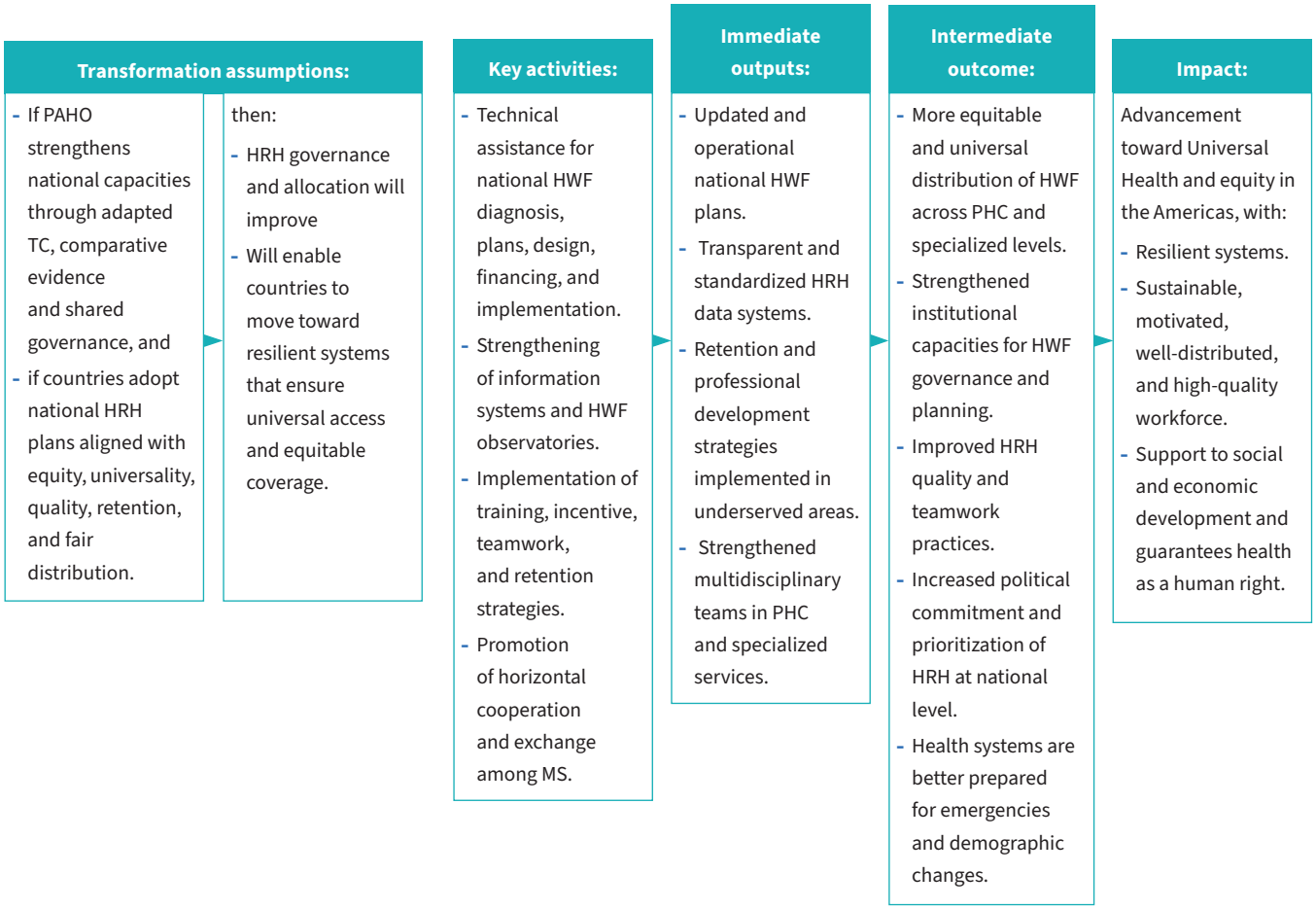
Starting point:

Framework: PAHO Strategic Plan 2026–2031.

Strategic axis: Objective 5, prioritizing governance, leadership, transparency, and accountability.

PAHO tools: differentiated technical cooperation, regional evidence generation, training tools (e.g. observatories), educational tools (e.g. Virtual Campus for Health) and strengthened information systems.

Country context: eight selected countries.



HRH, human resources for health; HWF, health workforce; MS, Member State; PAHO, Pan American Health Organization; PHC, primary health care; TC, technical cooperation

Appendix 5. Characteristics and contributions of informants

Table A5.1. Participants by type of institution

Type of institution	Online survey	Phase 1 interviews	Case study interviews
Ministry of health	16	6	11
International organization (including PAHO)	9	7	9
Academic institution	1	1	10
Total	26	14	30

Note: PAHO, Pan American Health Organization.

Table A5.2. Contributions of informants

Contribution to the evaluation	Ministries of health and other public organizations	Academic institutions	International organizations
How did they participate?	These informants participated in different ways in the evaluation, either by responding to the online survey or through online or in-person interviews.	These informants participated in different ways in the evaluation, either by responding to the online survey or through online or in-person interviews.	These informants participated in different ways in the evaluation, either by responding to the online survey or through online or in-person interviews.
How did their contributions inform the findings and conclusions?	The contributions of these informants mainly provided a national and subnational perspective by describing government programs, achievements, and the challenges faced historically and currently. In addition, they assessed the role of PAHO's technical cooperation in the field of the health workforce in relation to progress achieved and proposals for improvement. Some of them also identified critical issues requiring improvement.	Their contributions were characterized by an analytical, systemic, and forward-looking perspective. Most of them raised regional and even international (outside the Region) issues related to the topics addressed. The assessment of PAHO's technical cooperation tended to be more critical, incorporating issues that were not raised by other informants.	These informants provided an external perspective on government programs, with a more critical view of those programs and their achievements. Their perspective on PAHO's technical cooperation included recognition of achievements and proposals for improvement. They also contributed comments from a regional and international perspective.

Note: PAHO, Pan American Health Organization.

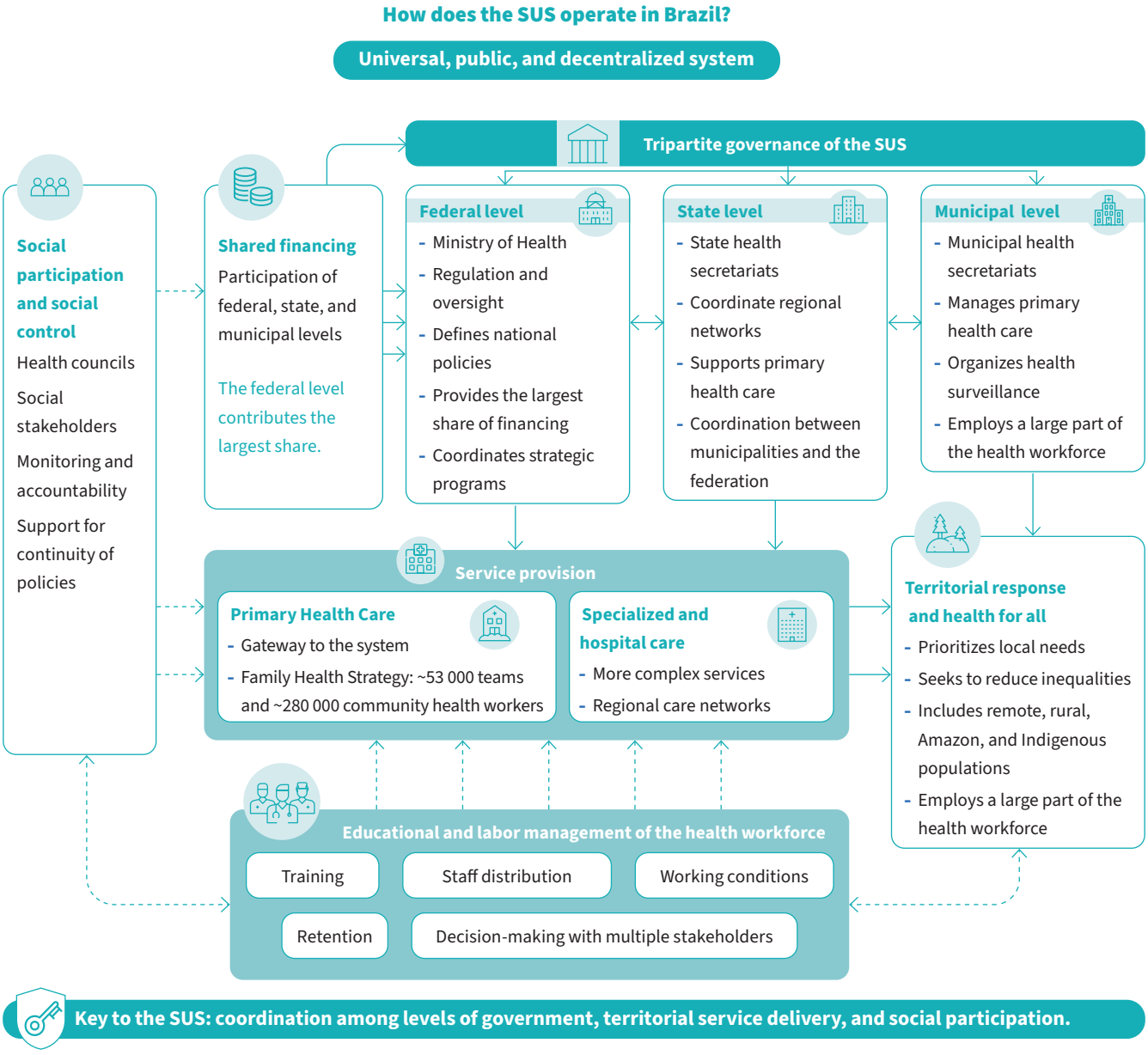
Appendix 6. Case study dissemination materials for Brazil, Guatemala, and Guyana

Brazil: how participatory governance in the Unified Health System strengthens the health workforce

Brazil's Unified Health System (Sistema Único de Saúde [SUS]) has the capacity to sustain, adapt, and expand its health workforce (HWF) policies across a country of continental dimensions marked by profound territorial, social, and ethnic and racial disparities. The strength of the SUS lies not only in being a universal system but also in the way it has built an institutional architecture capable of withstanding crises, political changes, and territorial pressures through decentralized, participatory, and sustained governance over time.

The SUS is organized around a tripartite model in which the federal, state, and municipal levels share responsibilities for the financing, regulation, management, and delivery of health services. This structure has enabled decision-making related to the health system, including issues concerning the HWF, to depend not on a single actor but rather on a network of public institutions, state and municipal secretariats, health councils, professional councils, academic institutions, entities involved in international technical cooperation, and social actors.

Figure A6.1. Operation of the SUS in Brazil



Note: SUS, Unified Health System (Sistema Único de Saúde).

From policy to practice: what the Unified Health System has achieved

1. Decentralized governance with the participation of multiple stakeholders

One of the SUS's main achievements has been the consolidation of a governance model in which decision-making is distributed across different levels of government and system stakeholders. All decisions related to the education and employment of the HWF must be discussed and agreed upon by the different levels within the SUS structure. This decision-making mechanism serves as a foundation for institutional stability. By engaging stakeholders at the federal, state, and

municipal levels, the system prevents decisions regarding the HWF from being concentrated within a single authority. This approach ensures that education, labor, and workforce distribution policies are more closely aligned with territorial needs.

2. Primary health care as a platform for territorial resilience

The Family Health Strategy represents one of the clearest examples of the SUS's capacity to bring health services closer to the population. With approximately 53 000 health teams and 280 000 community health workers distributed throughout the country, Brazil has built an operational foundation capable of sustaining primary health care as the backbone of the system. Although this model does not completely eliminate disparities, it does create an institutional platform from which the country can respond, reorganize, and prioritize territories with greater needs, particularly rural, Amazonian, and indigenous areas.

3. Capacity for adaptation during the pandemic

The coronavirus disease 2019 (COVID-19) pandemic exposed structural challenges affecting the HWF, including excessive workloads, workforce shortages in rural and remote areas, and precarious employment arrangements. However, it also demonstrated the SUS's flexibility in reorganizing roles and responding to a public health emergency. In some regions, different professional profiles assumed temporary responsibilities to sustain critical activities such as vaccination, service management, and continuity of care. This experience showed that HWF resilience depends not only on the number of available professionals but also on the institutional capacity to coordinate stakeholders, redistribute tasks, and sustain services during times of crisis.

4. More Doctors as a response to territorial disparities

The More Doctors Program (Programa Mais Médicos) represents a milestone in the pursuit of a broader distribution of the HWF for all populations. Its creation responded to the need to address physician shortages in rural, indigenous, and hard-to-reach areas. Although the program has undergone adjustments and faced challenges, its relaunch as the More Doctors for Brazil Project (Projeto Mais Médicos para o Brasil) demonstrates the country's capacity to learn and refine and adapt its policies. This new phase prioritizes the participation of Brazilian physicians, incorporates inclusion criteria for Afro-Brazilians, indigenous peoples, and people with disabilities, and seeks to expand the system's response to historically underserved territories. The value of the program goes beyond workforce recruitment; its greatest contribution has been advancing toward a distribution of the HWF that supports access to health for all.

5. Social oversight as a mechanism for continuity

Another achievement of the SUS is the incorporation of social oversight as part of its governance structure. Health councils at the three levels of government, together with the participation of social actors, make it possible to exercise oversight, demand accountability, and sustain system priorities even amid changes in government. This component is essential for resilience, as it helps ensure that public policies do not depend exclusively on political circumstances but rather on broader institutional and social processes.

Box A6.1 Short- and medium-term HWF challenges faced by the SUS

1. A long-standing challenge in HWF policy has been the geographical distribution of health personnel for all populations. The new More Doctors for Brazil Project aims to recruit approximately 1500 physicians annually; however, the strategy's capacity to retain physicians in these areas, expand coverage, and increase service delivery remains unclear. In addition, the program does not clearly address the recruitment of other professional categories, such as nursing and dentistry.
2. Pressure resulting from insufficient financial resources has led municipalities to hire personnel through third-party agencies under precarious working conditions, including temporary contracts, low salary levels, and reduced labor benefits. The precarization of the HWF may have negative consequences for the system's capacity to manage service delivery effectively.
3. A key and expanding challenge is regulation of private sector participation. Within the SUS the involvement of the private sector has grown significantly, particularly in first-level care through the outsourcing of primary health care services. This segment of the SUS, known as Supplementary Health, currently covers 25% of demand and continues to expand, hiring HWF personnel according to private practice standards, which tend to be lower than those that apply in the public sector.

Note: HWF, health workforce; SUS, Unified Health System (Sistema Único de Saúde).

PAHO's technical cooperation support for health workforce development within the Unified Health System

1. Strengthening health workforce planning

PAHO's technical cooperation has contributed to strengthening HWF planning processes by supporting the Ministry of Health with technical expertise, institutional accompaniment, and specialized capacities. Its role has been particularly relevant in translating evidence into public policy decisions and sustaining technical processes within a highly complex system. This demonstrates that technical cooperation has served as an actor for continuity, coordination, and institutional memory.

2. Strategic deployment of specialized consultants

One of PAHO's concrete contributions has been the recruitment of specialized consultants and their strategic deployment within the Ministry of Health. This mechanism has made it possible to strengthen technical capacities within national institutions, support management processes, and ensure continuity in key lines of work, even in contexts of political or administrative change.

3. Support for the education and management of health personnel

Technical cooperation has remained aligned with national policies, particularly in the education and management of health personnel. This support has contributed to strengthening the country's capacity to link the education of health professionals with the needs of the system, especially in areas related to primary health care, territorial distribution, specialist training, and capacity development. In this area, the Virtual Campus for Public Health and digital training strategies have been important tools for expanding access to educational processes and supporting the continuing education of health personnel.

4. Support for digitalization and distance learning

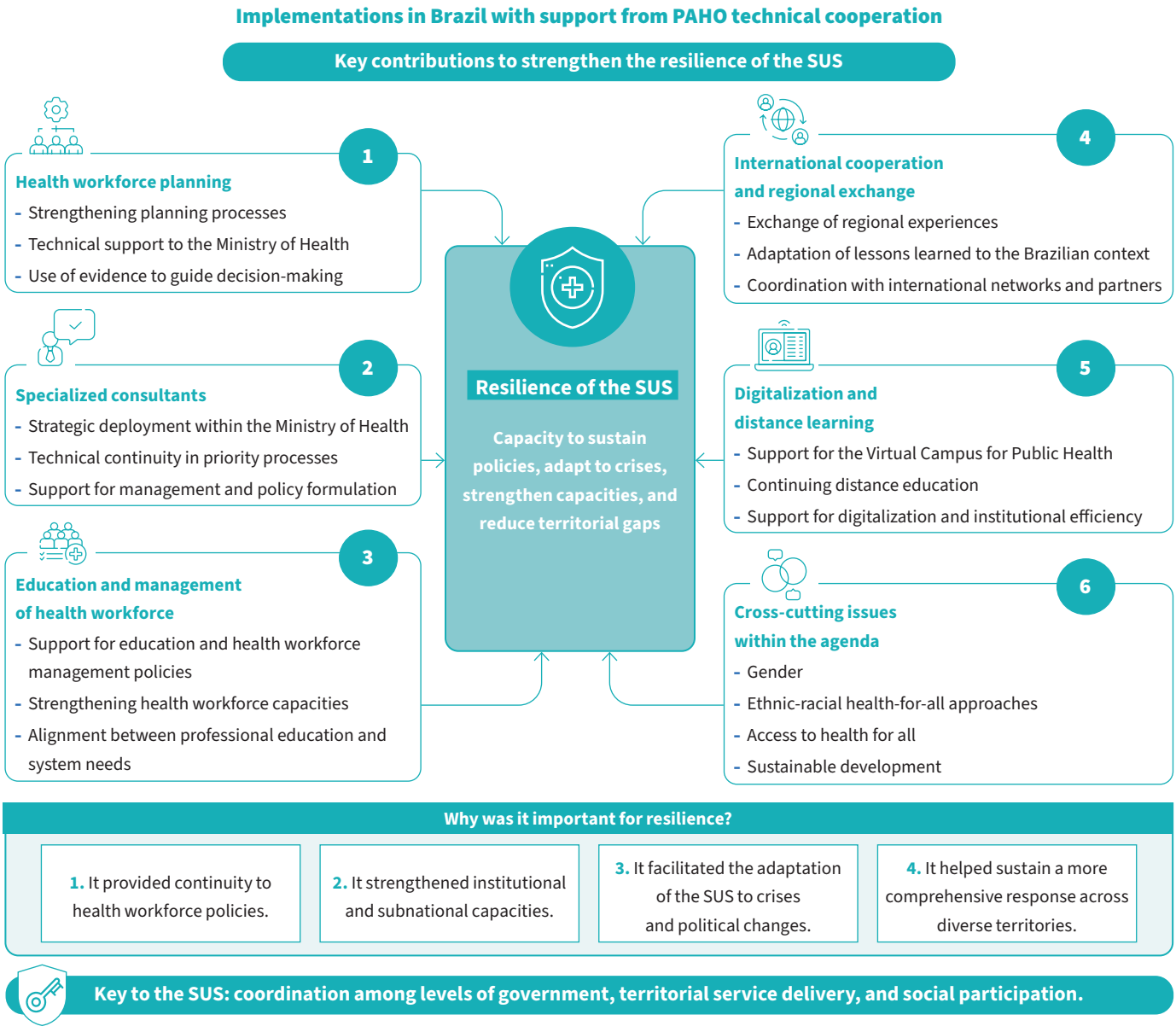
The digitalization of services, the use of electronic health records, and distance learning have been identified as factors that improve the efficiency of technical cooperation. These tools make it possible to expand the reach of actions, reduce territorial

barriers, and strengthen capacities at the state and municipal levels. In the Brazilian context, digitalization has strategic value because it can help connect diverse territories, support HWF planning, and strengthen the continuing education of health personnel.

5. Positioning health equity issues within the health workforce agenda

PAHO's technical cooperation has also contributed to positioning health equity issues such as gender, ethnic equity, access to health for all, and sustainable development within the HWF agenda. This contribution is particularly relevant because Brazil's challenges cannot be explained solely by the number of available professionals but by the ways in which territorial, racial, cultural, economic, and gender disparities affect the distribution, retention, and working conditions of health personnel.

Figure A6.2. Implementation in Brazil with support from PAHO technical cooperation



Note: PAHO, Pan American Health Organization; SUS, Unified Health System (Sistema Único de Saúde).

Looking ahead: strategic recommendations

- Strengthen the development of tools that support the assessment and monitoring of the HWF, such as health workforce observatories, with the participation of the Ministry of Health, academia, and PAHO's technical cooperation.
- Monitor the development and results of programs across the different dimensions of the HWF, including initiatives related to education, employment, geographical distribution, and the integration of health equity considerations, such as gender and the needs of populations in situations of vulnerability.
- Engage private-sector actors in both the education and employment dimensions of the HWF, as part of governance efforts for HWF planning at the national, state, and municipal levels, in order to establish common standards across these processes.
- Develop plans for the expansion and use of digital technologies by the HWF, including the provision of sustainable financing across all levels of the health system and training opportunities for health personnel to support the effective use of these technologies in achieving universal health coverage goals.
- Strengthen the strategic and analytical positioning of technical cooperation by directing support toward the territorial and organizational specificities of the SUS.

Box A6.2 What works: best practices and lessons learned from Brazil

- The establishment of the SUS has been a successful strategy for improving health in Brazil through the implementation of a participatory governance structure.
- The implementation of the SUS requires the development and strengthening of the health workforce, to which PAHO technical cooperation has contributed.
- The establishment of the SUS provides lessons that can be adapted by other countries in the Region, drawing on the lessons learned from its implementation in Brazil.

Note: PAHO, Pan American Health Organization; SUS, Unified Health System (Sistema Único de Saúde).

Guyana: from critical workforce shortages to a strategic response in the health workforce

A system under pressure: growth outpacing workforce capacity

The HWF situation in Guyana is shaped by the country's dynamic economic expansion. This growth, driven primarily by the development of the oil industry, has triggered an unprecedented expansion of health infrastructure, which in turn has generated a critical and urgent demand for thousands of health professionals. Guyana's health system is predominantly public, universal, and financed through general taxation. The Ministry of Health is the main institution responsible for service delivery. At the same time, Guyana's expanding economy has stimulated the growth of the private sector through the attraction of international companies seeking to invest in the establishment of hospitals in the country, such as the Mount Sinai Health System of New York. Through the participation of private capital, the health system is expected to modernize its infrastructure and increase the availability of resources, illustrating how international actors view Guyana as an attractive environment for investment in health.

Despite this growth, a critical challenge persists: the shortage of health personnel, particularly nurses. Continuous migration and the country's limited training capacity threaten to slow the progress of the health system precisely at a time when greater expansion is required.

New opportunities mean new risks in a growing health market

The rapid growth of the health sector, driven by economic expansion and the increasing contribution of foreign investment, is creating a scenario in which the country could become an attractive international market for the HWF. This trend is likely to increase the mobility of professionals, both national and international, drawn by new employment opportunities within an expanding health system.

While this dynamic represents an opportunity to close human resource gaps in the short term, it also poses significant risks. Among the most notable are:

- The potential heterogeneity in the quality of training among professionals entering the country;
- Unequal competition between the public and private sectors for the available HWF.

Without adequate planning, this context could deepen disparities in the distribution of health personnel by favoring concentration in urban areas or private institutions. It is therefore essential to move toward a strong regulatory framework that organizes and ensures the quality of professionals participating in the health labor market.

Table A6.1. Persistent system challenges for the health workforce in Guyana

Challenge	What is happening?
Brain drain	Historically, Guyana has lost up to 18% of its nurses annually to migration. Although recent signs of return migration have emerged, the outflow of personnel remains high and continues to affect health system capacity.
Uneven distribution	There is a shortage of specialists, and most health personnel are concentrated in the capital, Georgetown, making access to services more difficult in rural areas.
Lack of a health workforce development plan	There is no strong national plan or consolidated strategic unit to support long-term health workforce planning.

A turning point: rethinking workforce education

In response to this situation, PAHO technical cooperation proposed an innovative strategy that marked a turning point. Rather than focusing solely on increasing the number of professionals, the strategy sought to transform the nursing education model through a hybrid approach that combined virtual learning with in-person practical training.

This model not only expanded educational capacity but also:

- Enabled students from remote regions to access quality education without leaving their communities;
- Eliminated dependence on limited physical infrastructure in the capital;
- Facilitated the rapid scalability of the health education system.

Scaling up fast: expanding training capacity

The impact began to be observed rapidly in the expansion of the country's training capacity: in a single academic cycle, Guyana graduated between 200 and 300 nurses and enrolled more than 680 students in training programs. Together, these graduation and enrollment indicators demonstrate a significant expansion in the nursing education pipeline. This represents a structural strengthening of the country's capacity to respond to the growing demand for health services.

Beyond training: building retention

The success of the hybrid program is not limited to the increase in the education of nursing personnel. Its design has also contributed to addressing one of the most complex challenges facing the system: the retention of health personnel across different areas. By decentralizing education and strengthening local opportunities for professional development, including postgraduate programs within the country, concrete incentives have been created for professionals to remain in Guyana. In fact, retention among physicians pursuing specialty training locally reaches levels close to 80%.

In addition, an emerging phenomenon has been observed: the return of nurses who had previously migrated, attracted by improved training opportunities, job stability, and government benefits such as free education. National policies have played an important role in this process by incorporating nonmonetary incentives, including access to housing, scholarships, and opportunities for career advancement, as well as the expansion of private demand for the HWF. Efforts have also focused on institutional strengthening through the creation of a strategic HWF unit.

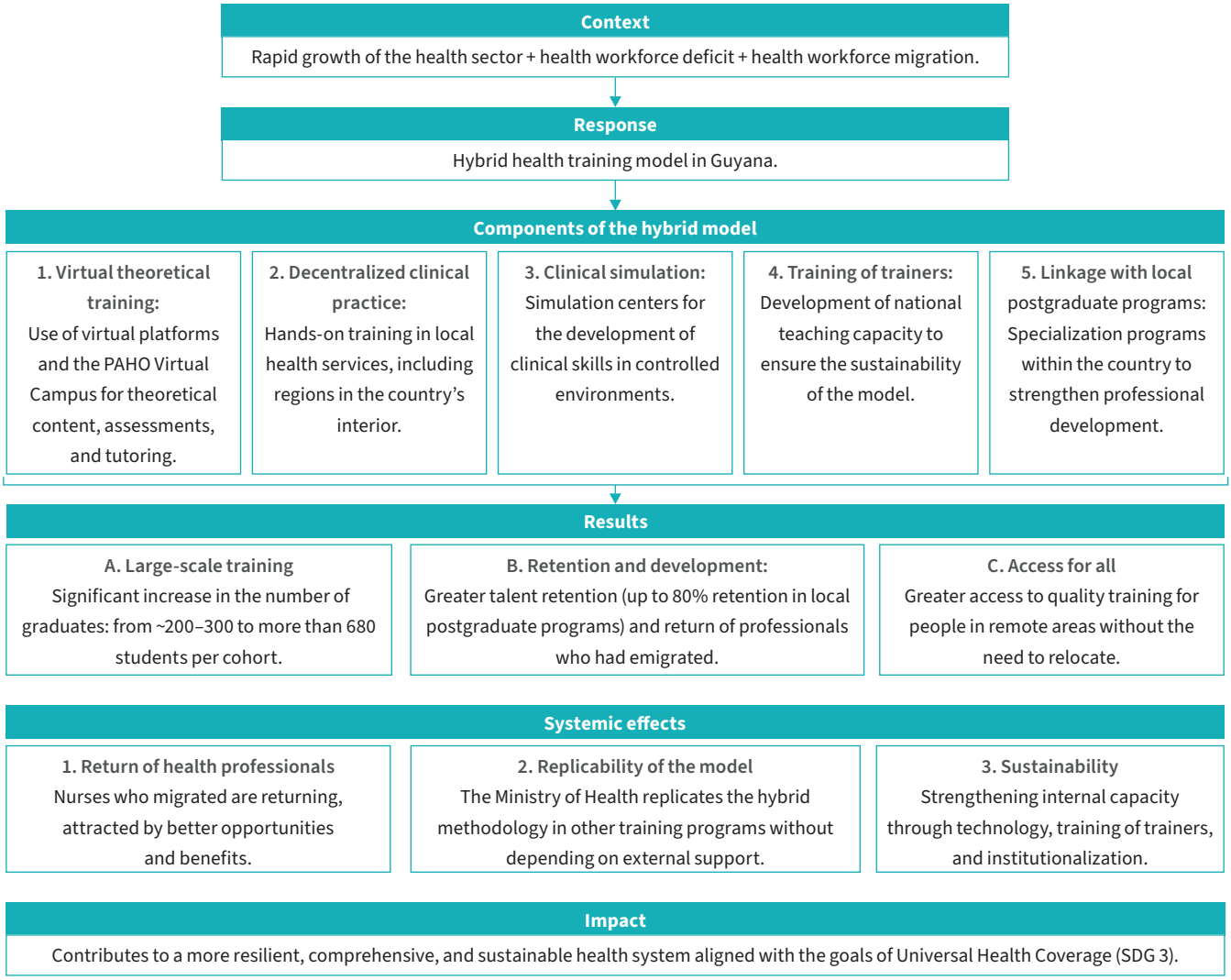
From pilot to system change: sustaining the model

Another key element of this success story is implementation efficiency. PAHO's initial investment in the hybrid model has generated a multiplier effect, as the Ministry of Health itself has begun replicating this methodology in other training programs without relying on continuous external support.

The use of virtual platforms, together with resources such as the PAHO Virtual Campus for Public Health, has made it possible to train hundreds of students simultaneously while optimizing resources and time. This has been complemented by a "training of trainers" strategy that has strengthened the country's internal capacity, laying the foundation for long-term sustainability.

The hybrid program represents far more than an educational innovation; it constitutes a structural response to the HWF crisis in the context of accelerated growth. By aligning education, retention, and investment, Guyana is building a model that not only responds to its current needs but also lays the foundation for a more resilient and sustainable health system.

Figure A6.3. Hybrid model for health workforce education in Guyana



Note: PAHO, Pan American Health Organization; SDG, Sustainable Development Goal.

How PAHO technical cooperation made the difference

PAHO technical cooperation is regarded as highly relevant because it focused on the main "bottleneck": the lack of capacity to educate and retain the HWF.

Support for the creation of new technical profiles and for workforce planning related to new hospitals demonstrates that PAHO is responding to the specific needs associated with expansion and contributing directly to the national goal of achieving universal health coverage (Sustainable Development Goal 3).

Its relevance stems not only from the technical content of the intervention but also from how the cooperation itself was established. The case of Guyana shows that PAHO's sustained support, grounded in trust, a strategic understanding of the national context, and long-term collaboration with the Ministry of Health, made it possible to identify a critical need and translate it into a concrete, feasible, and scalable response. Technical cooperation did not operate as an isolated intervention

but rather as a process of strategic advisory support that combined regional capacities, institutional tools – such as the Virtual Campus for Public Health – and national management capacity. This enabled the hybrid education model not only to respond to an emergency but also to strengthen internal capacities for its continuity and replication.

A model for the Region: lessons beyond Guyana

In this regard, the model is especially relevant for other small countries and island states facing similar structural constraints in the Region, particularly in the Caribbean, such as limitations in training infrastructure, migration of health personnel, and difficulties in retaining talent in rural or remote areas. The experience demonstrates that when technical cooperation is built on institutional trust, adaptation to context, and shared national responsibility, it can become a strategic tool for accelerating sustainable solutions in the HWF.

Looking ahead: strategic recommendations

National stakeholders have outlined clear recommendations to maximize the future impact of PAHO technical cooperation:

- Promote a regulatory model for education and service providers that considers the current and future complexity of the HWF over the medium term (five years).
- Strengthen the country's internal capacity for HWF education through mixed technical teams (local and international), innovative models, and the promotion of exchanges of experiences and lessons learned with Caribbean countries.
- Support the design, implementation, and monitoring of a national HWF development plan, including the strengthening of a strategic HWF unit within the Ministry of Health.
- Monitor migration flows of health personnel (both emigration and immigration) to provide evidence-based recommendations to the relevant authorities.
- Monitor the performance of the private sector as an educator and employer of the HWF.
- Promote greater involvement of operational stakeholders, such as nursing leadership, in curriculum design and review to ensure clinical and practical relevance.

Box A6.3. What works: good practices and lessons learned from Guyana

- The hybrid nursing education program in Guyana addressed the problem of health personnel shortages, particularly in nursing.
- The program is a successful example of collaboration between local stakeholders and PAHO technical cooperation.
- PAHO technical cooperation was more effective because it originated from a priority need clearly identified by the country and, together with the Ministry of Health, translated that need into a concrete, scalable solution aligned with national capacities.
- The achievements of the original program extended beyond training itself by fostering a sense of attachment among health personnel to their local communities and contributing to the retention of health personnel within the country.
- The success of the hybrid program provides an extremely valuable lesson for the Region, particularly for Caribbean countries that continuously face the migration of their health personnel to other countries.

Note: PAHO, Pan American Health Organization.

Guatemala: challenges in strengthening the health workforce to provide care for indigenous populations in a context of institutional instability

A segmented health system facing territorial and intercultural gaps

The structural segmentation of Guatemala's health system divides the provision of care across the population. The Guatemalan Institute of Social Security primarily serves salaried workers who contribute to the system. The Ministry of Public Health and Social Assistance provides services to the population that is not covered by social security. An atomized private sector, including both for-profit and nonprofit providers, serves different population groups. This fragmented structure hinders integrated HWF planning and limits the system's ability to respond effectively to population health needs.

Guatemala also faces major challenges in providing health services in areas with large indigenous populations. Approximately 44% of the population is of indigenous origin, primarily Mayan. Indigenous populations are concentrated in departments such as Alta Verapaz, Baja Verapaz, Huehuetenango, and Quiché. In addition to geographical barriers, the health system faces difficulties in providing services in indigenous languages. It also faces limitations in training personnel with intercultural competencies and adapting care models to local contexts. Structural barriers and disparities in access to care continue to affect these populations.

A crisis that exposed structural weaknesses

The COVID-19 pandemic exacerbated the challenges associated with providing care to indigenous populations and exposed many of the weaknesses summarized in Table A6.2. Although the pandemic highlighted the need to strengthen the HWF, these lessons have not yet been fully translated into sustained long-term policies.

System pressures: health workforce challenges and their impacts

Table A6.2. Challenges for the health workforce derived from the pandemic and their implications

Challenge	Description	Implications
Health workforce shortages and urban concentration of personnel	The health workforce and specialists are concentrated in urban areas, while departments with large indigenous populations face staff shortages and high staff turnover.	Reduced access to and coverage of specialized health services in rural and indigenous areas
Limited specialized training with an intercultural approach	The availability of specialized training positions is insufficient, and training does not always respond to the country's cultural and linguistic realities.	Specialist shortages and culturally inappropriate health care for indigenous populations
Limited incentives to work in areas with a high concentration of indigenous populations	Salary and hiring conditions make it difficult to attract and retain personnel in hard-to-reach areas.	Instability of health teams and limited continuity of care
Lack of long-term policies	High turnover among authorities and dependence on external projects hinder the continuity of health workforce actions.	Risk of losing progress and weak institutionalization of initiatives

From gaps to action: how PAHO technical cooperation is supporting indigenous health

To address these challenges, PAHO's technical cooperation has focused on supporting training, planning, and technical advisory processes aimed at strengthening national capacities. Local stakeholders value PAHO as a trusted technical partner. The Organization provides guidance, facilitates interinstitutional coordination, and helps sustain institutional processes in a context characterized by high political turnover. Its added value lies in its ability to convene stakeholders, provide evidence, and facilitate technical processes in settings where institutional continuity is often limited.

PAHO's technical cooperation is reflected in four main areas. First, it has supported planning and regulatory processes, including the National Nursing Plan 2026–2031. This initiative aims to professionalize the sector, standardize curricula, and improve the working conditions of nursing personnel. Second, PAHO has promoted curricular innovation in family and community medicine at the Guatemalan Institute of Social Security through the design of a master's degree and diploma program in family and community medicine. Third, it has supported large-scale training of nursing assistants in remote areas through an intercultural approach. A cascade model has been used to train departmental focal points and replicate knowledge at the municipal and community levels. Fourth, PAHO has provided operational support and mobilized resources to facilitate workshops, technical advisory services, and the participation of international experts.

Why cooperation works: three elements that make a difference

These actions alone do not solve the structural problem of workforce distribution and retention. Nevertheless, they illustrate a pathway for addressing these challenges. Three elements, in particular, help explain the relevance of PAHO's technical cooperation.

1. Alignment with country priorities: technical assistance responds to needs identified by national stakeholders rather than imposing an external agenda.
2. Support for sustainable capacity development: training and planning processes are designed to generate effects that extend beyond a one-time training activity.
3. Trusted technical partnership: PAHO serves as a trusted partner in a context characterized by high institutional instability, helping to sustain technical processes and facilitate coordination among stakeholders.

Where PAHO's technical cooperation is supporting change

Table A6.3. Improving health in indigenous areas: actions and achievements of PAHO technical cooperation

Starting point	PAHO-supported intervention	Observed or expected changes	Added value of the cooperation
Nursing requires greater professionalization, more consistent curricula, and better career development conditions.	Support for the National Nursing Plan 2026–2031	A road map to professionalize the sector, organize training, and improve the status and working conditions of nursing personnel	Technical advisory support, institutional coordination, and assistance in transforming long-standing needs into a planning instrument
The model of care continues to place greater emphasis on curative and hospital-based care, with more limited development of community-based approaches.	Support for the design of the master's degree and the diploma in family and community medicine at the Guatemalan Institute of Social Security	Strengthened capacities to advance comprehensive family- and community-based care	Methodological and technical contribution to link specialized training with territorial and community needs

Table A6.3. Improving health in indigenous areas: actions and achievements of PAHO technical cooperation *(continued)*

Starting point	PAHO-supported intervention	Observed or expected changes	Added value of the cooperation
Rural and indigenous areas require personnel with intercultural competencies and stronger community engagement.	Training of more than 1300 nursing assistants with an intercultural approach in remote areas, utilizing a cascade model	Greater availability of trained personnel to provide culturally appropriate care in prioritized departments and municipalities	Scaling up training and transferring capacities to local levels
Technical processes face administrative, financial, and continuity constraints.	Facilitation of expert advice, workshops, and operational support to sustain priority processes	Greater feasibility of technical activities that might otherwise have been halted due to administrative or resource constraints	A technical, logistical, and financial bridging role in a changing institutional context

Note: PAHO, Pan American Health Organization.

Working within constraints: limits to impact

In recent years, some local stakeholders have noted a reduced PAHO presence. They also note that the rotation or intermittent hiring of HWF consultants may affect the continuity of technical processes. Stakeholders further point to the risk that technical cooperation may become overly focused on assessments or vertical disease-specific programs. As a result, less attention may be given to the management, training, retention, and development of the HWF.

In a context characterized by frequent turnover among ministers and vice ministers of health, the sustainability of HWF strengthening efforts depends on several factors. These include the institutionalization of key processes, the availability of budgetary support, and their integration into medium- and long-term planning instruments. Such efforts are essential to improving health care in areas with large indigenous populations.

Box A6.4. What works: good practices and lessons learned from Guatemala's experience

Several lessons from the case of Guatemala may be relevant to other countries with large indigenous populations and contexts of institutional instability:

- Technical cooperation has greater impact when it supports long-term institutional processes, such as national plans, curricula, and professionalization mechanisms.
- Retaining personnel in rural and indigenous territories requires a combination of training, incentives, adequate working conditions, and institutional support.
- Intercultural training should be understood as a core health workforce capacity rather than as an accessory training component.
- The continuity of consultants and technical teams helps build trust, preserve institutional memory, and support the monitoring of complex processes.
- Sustainability requires the engagement of stakeholders beyond ministries of health, including training institutions, civil service bodies, public finance institutions, and territorial authorities.

Looking ahead: recommendations for strengthening the health workforce in contexts characterized by large indigenous populations and institutional instability

These recommendations emphasize the need to expand PAHO's sphere of influence and strengthen the development of an HWF capable of responding to the needs of indigenous populations.

1. **Expand policy advocacy:** PAHO must engage key stakeholders beyond the Ministry of Health, including universities, the National Civil Service Office, and the Ministry of Finance, to promote sustainable reforms in HWF training, recruitment, financing, and regulation, with particular attention to the needs of indigenous populations.
2. **Promote professionalization and improvement of working conditions for the HWF:** within its sphere of competence, PAHO must support policies for specialist retention and the professionalization of nursing. This includes promoting the transition of nursing assistants to technical and professional nursing qualifications, supported by appropriate budgetary and legal frameworks. These efforts are particularly important for strengthening services in rural and indigenous areas.
3. **Adapt technical cooperation to the local context:** PAHO proposals must be aligned with the Guatemalan context and local realities to ensure their applicability and avoid merely replicating models used elsewhere. This should include innovative approaches, such as digital health and international exchanges, while considering the specific needs of indigenous populations.
4. **Prioritize technical cooperation strategically:** PAHO and the Ministry of Health must identify priority areas for cooperation based on technical criteria, including training activities. This will help ensure that investments in the HWF translate into improvements in the management, coverage, and quality of health services for Indigenous populations.
5. **Strengthen collaboration with local stakeholders:** PAHO's technical cooperation must establish operational arrangements with the broad range of public and private actors involved in providing services to indigenous populations. It is important to leverage initiatives supported by global agencies to provide technical and logistical assistance for the delivery of health services to these populations.

Appendix 7. Characteristics of case study countries

Indicator	Brazil	Guyana	Guatemala
Demographic			
Total population[a]	216.4 million (2023)	813 834 (2023)	18.1 million (2023)
Fertility rate[a]	1.6 (2023)	2.4 (2023)	2.3 (2023)
Life expectancy (years)[a]	73.4 (2022)	66.0 (2022)	70.0 (2022)
Social			
Unemployment rate (%)[b]	8.0% (2023)	12.4% (2023)	3.0% (2023)
Illiteracy rate (%)[a]	4.6% (2024)	6.0% (2024)	19.0% (2024)
Economic			
GDP growth (%)[c]	2.4% (2025)	11.8% (2025)	3.9% (2025)
GDP per capita (USD)[b]	USD 10 913 (2023)	USD 20 626 (2023)	USD 5 795 (2023)
Projected inflation 2026[c]	3.5%	3.0%	3.3–3.5%
Health			
Health spending (% of GDP)[b]	9.6% (2022)	5.9% (2022)	6.3% (2022)
Nurses (per 1000 people)[b]	8.8 (2021)	3.48 (2021)	1.3 (2020)
Physicians (per 1000 people)[b]	2.4 (2023)	1.41 (2020)	0.4 (2023)

Note: GDP, gross domestic product. Years in parentheses indicate the reference year of the data.

[a] United Nations Economic Commission for Latin America and the Caribbean. CEPALSTAT: Statistical Databases and Publications. Santiago: ECLAC; 2026 [cited 25 April 2026]. Available from: https://statistics.cepal.org/portal/cepalstat.

[b] World Bank. DataBank – World Development Indicators. Washington, D.C.: World Bank; 2026 [cited 25 April 2026]. Available from: https://databank.worldbank.org/source/world-development-indicators.

[c] International Monetary Fund. World Economic Outlook. Washington, DC: IMF; 2026 [cited 25 April 2026]. Available from: https://www.imf.org/en/Publications/WEO.

Appendix 8. Traceability matrix

This matrix presents, for each evaluation dimension, the corresponding evaluation questions and findings, as well as the conclusions and recommendations derived from them.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
Relevance/ coherence	To what extent have contextual factors in the post-pandemic period (political, institutional, operational, organizational, financial, and cultural) determined the uptake of PAHO's TC on the HWF by MSs?	The pandemic intensified workloads, emotional distress, and preexisting structural challenges affecting the HWF. In addition, socioeconomic factors, such as accelerated economic growth in some countries, triggered retention and migration crises. International migration of health personnel and persistent structural gaps in workforce distribution also continue to affect the response capacity of health systems.	5. PAHO's TC effectively supports MSs in addressing transnational and structural challenges related to the HWF. In areas such as international migration, PAHO fulfills its role through knowledge transfer, facilitation of dialogue among national stakeholders, and technical advisory support for the development of innovative responses. 8. Political instability reduces the sustainability of TC actions on the HWF and, in some cases, limits the ability to develop long-term planning scenarios.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 4. Strengthen regional cooperation mechanisms to address HWF migration, support evidence-informed policy dialogue, and promote ethical and sustainable workforce mobility arrangements. 5. Support MSs in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	To what extent have the policies, programs, measures, and changes introduced by MSs with the support of PAHO's TC service provision been consistent with achieving the expected outcomes?	A high level of overall coherence was reported, with a median score of 4 in the online survey. However, a clear gap remains: PAHO tends to focus on diagnostics aligned with global agendas, while ministries of health require direct support for the implementation of solutions to specific local challenges.	1. There is a high degree of coherence and alignment between the specific strategies promoted through PAHO's TC on the HWF and the needs, policies, and programs of MSs. However, this alignment is less evident in health equity issues that form part of PAHO's broader agenda. 2. Countries recognize that PAHO has a great capacity for diagnosing challenges, but that implementing pathways and solutions, depending on the specific issue, tends to be problematic, considering that governments can reduce financial support for and commitment to the achievement of goals depending on political cycles or trends.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.
	To what extent did PAHO's TC on the HWF incorporate health equity issues from the PAHO Strategic Plan (2026–2031), including intercultural approaches in HWF planning (particularly in contexts with multiple ethnic groups and languages), gender considerations (especially in countries with a highly feminized HWF), health for all and human rights approaches (including decent work, equal pay for equal work, incentives for hardship postings, and career development pathways), and disability?	PAHO actively promotes these health equity issues (median score of 4 in the online survey). The survey particularly highlighted the intercultural relevance of TC in Guatemala through large-scale training initiatives. However, in Brazil, stakeholders pointed to persistent gaps, with women – who represent 75% of the HWF – continuing to face salary disparities and limited visibility in technical roles.	1. There is a high degree of coherence and alignment between the specific strategies promoted through PAHO's TC on the HWF and the needs, policies, and programs of MSs. However, this alignment is less evident in health equity issues that form part of PAHO's broader agenda. 10. Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	To what extent are PAHO's TC interventions on the HWF aligned with the achievement of the 2030 SDGs (specifically SDG 3 – "Good Health and Well-Being" ["Ensure healthy lives and promote well-being for all at all ages"])?	The strategies are highly aligned with the SDGs (median score of 4 in the online survey), and PAHO is recognized as a key reference in this area. However, some informants indicated that this specific approach has recently lost visibility.	1. First, efforts promoted through PAHO's cross-cutting agenda to advance national, regional, and global goals to achieve sustainable development have not consistently been prioritized at the same level by national authorities.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.
Effectiveness	To what extent has PAHO's TC on the HWF supported the implementation of national policies to strengthen HWF governance in countries across the Region?	TC has been highly effective in supporting national policies (median score of 4 in the online survey). In Guatemala, PAHO supported the development of the National Nursing Plan 2026–2031, while in Brazil it contributed critical "institutional memory" that helped safeguard continuity amid political turnovers.	3. Member States recognize the strong coordination and response capacity of PAHO's TC, which helps in achieving established objectives, despite the replacement or elimination of positions in HWF TC teams in certain countries. 2. It is important to recognize that the implementation of policies requires the participation of a variety of stakeholders at the national and international levels.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.
	To what extent did PAHO's TC on the HWF address country needs and priorities related to strengthening health systems and the HWF in the post-pandemic period?	TC responds effectively to the development of situational diagnoses and plans (median score of 4 in the online survey). Despite this, it faces limitations in addressing specific challenges. In addition to the emphasis on situational diagnoses, MSs indicated that technical support is more concentrated on the identification of challenges than on the implementation of concrete solutions adapted to local contexts.	2. Countries recognize that PAHO has a great capacity for diagnosing challenges, but that implementing pathways and solutions, depending on the specific issue, tends to be problematic, considering that governments can reduce financial support for and commitment to the achievement of goals depending on political cycles or trends. 6. Countries have high expectations of a quantitative and qualitative increase in PAHO's TC on the HWF in the future.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	To what extent have PAHO's TC contributions helped improve HWF capacity, retention, and distribution in MSs?	Capacity, retention, and distribution of the HWF received a moderate score (median score of 3 in the online survey) due to the complexity of chronic challenges such as migration and uneven geographical distribution. In contrast, in Guyana, a hybrid decentralized training model projected 680 graduates—double the historical output—and achieved an 80% retention rate among medical postgraduate graduates.	9. Historical challenges related to HWF distribution persist, particularly in highly vulnerable areas, and there are currently no solution proposals applicable across the entire Region. 5. PAHO's TC effectively supports MSs in addressing transnational and structural challenges related to the HWF.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 3. Strengthen TC in HWF professional education and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners. 4. Strengthen regional cooperation mechanisms to address HWF migration, support evidence-informed policy dialogue, and promote ethical and sustainable workforce mobility arrangements.
	To what extent has PAHO's TC on the HWF reached subnational levels beyond central-level planning, contributing to tangible implementation and results?	A median score of 3 was reported in the online survey. In Guatemala, stakeholders highlighted insufficient support for local implementation, while in Brazil there is a need to reach primary health care services managed directly by municipalities.	9. Historical challenges related to HWF distribution persist, particularly in highly vulnerable areas, and there are currently no solution proposals applicable across the entire Region. 10. Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
Efficiency	To what extent were the financial, technical, and human resources allocated to PAHO's TC on the HWF sufficient, relevant, and effectively utilized?	Informants assigned a moderate score to the rated sufficiency of PAHO's own resources (median score of 3 in the online survey). However, TC was valued for facilitating the use of local resources; for example, in Brazil, Letters of Agreement helped bypass national bureaucratic rigidities and enabled the rapid implementation of projects.	3. Member States recognizes the strong coordination and response capacity of PAHO's TC, which helps in achieving established objectives, despite the replacement or elimination of positions in HWF TC teams in certain countries. 7. Technology transfer mechanisms, such as the Virtual Campus for Public Health and other digital resources, increase the efficiency of PAHO's TC on the HWF.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.
	How effectively did PAHO balance efficiency and the use of innovative digital approaches (e.g., virtual training), in its TC on the HWF?	The PAHO Virtual Campus for Public Health and digital literacy programs received high levels of recognition (median score of 4 in the online survey). The main challenges affecting their full efficiency are limited infrastructure and connectivity in rural areas, as well as constant shifts in political priorities.	4. Member States highlight the effectiveness of TC in promoting digital educational tools, particularly the use of the Virtual Campus for Public Health. 7. Technology transfer mechanisms, such as the Virtual Campus for Public Health and other digital resources, increase the efficiency of PAHO's TC on the HWF.	3. Strengthen TC in HWF professional education and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners.
	What evidence exists of PAHO's contribution to broader health system strengthening through HWF initiatives?	PAHO has contributed to promoting a comprehensive vision through the Integrated Health Services Networks approach, as reflected in Brazil, the Dominican Republic, Paraguay, and Guatemala. The adoption of telehealth and electronic records in Brazil provides evidence of broader health system strengthening. TC has also facilitated intersectoral coordination and dialogue among key stakeholders, indirectly strengthening health system governance, particularly in contexts with limited resources.	3. Member States also emphasized PAHO's capacity to provide training and technical advisory support, particularly in HWF policy development and planning, as well as its ability to convene political actors from different areas of government and facilitate coordination for the implementation of HWF-related plans and policies related to social and technological development. 7. The implementation of technology transfer must incorporate clear ethical safeguards to protect information confidentiality.	5. Support MS in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	To what extent did these resources contribute to the strengthening of the HWF and more resilient health systems in MSs?	Overall assessment was favorable, indicating that the resources used have contributed to strengthening more resilient health systems (median score of 4 in the online survey).	4. Member States highlight the effectiveness of TC in promoting digital educational tools, particularly the use of the Virtual Campus for Public Health. 10. Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves.	3. Strengthen TC in HWF professional education and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners. 5. Support MS in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems.
Sustainability	Is PAHO's TC designed from the outset to enable the scalability of HWF policies?	Survey respondents reported that this design is incorporated from the outset (median score of 4 in the online survey). A clear example of success is Guyana, where the training model promoted through TC has proven so effective that the Ministry of Health now replicates it autonomously across other disciplines. Although there are successful and replicable models, their sustainability depends largely on external factors such as political stability, institutional continuity, and the availability of financing.	8. Political instability reduces the sustainability of TC actions on the HWF and, in some cases, limits the ability to develop long-term planning scenarios. 1. These experiences have generated important national and regional references, particularly in Guyana and Paraguay.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	What needs to be strengthened to enhance PAHO's TC on the HWF while addressing long-term HWF availability?	Continuous financing, institutional governance, and mitigation of changes in ministerial administrations urgently need to be strengthened. In addition, internal adjustments within PAHO's own structure, such as the removal of dedicated HWF consultants, weaken continuity. High turnover among ministerial personnel and changes in government directly affect the continuity of policies and programs implemented with PAHO support.	8. There is broad consensus that sustainability depends on multiple factors, including contextual conditions such as epidemics and economic instability, as well as the internal structure of MoHs and the high turnover of personnel in leadership positions, as specifically identified in the Guatemala case study. 11. The political, economic, social, and health context of the Region is generating new challenges and strategic priorities for HWF development and for the role of TC.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 3. Strengthen TC in HWF professional education and lifelong learning, incorporating an interprofessional approach and collaborative practice in partnership with academic institutions, collaborating centers, professional associations, and other strategic partners.
	To what extent is PAHO's TC on the HWF contributing to resilient and sustainable health systems for all in MSs?	Sustained contributions were observed (median score of 4), with valuable interventions in areas with high levels of poverty and Indigenous populations aimed at reducing disparities, as seen in Paraguay. Despite this, uncertainty remains as to whether current efforts will translate into sustainable structural reforms over the long term.	10. Disparities in access to health services and in the geographical distribution of the HWF occur simultaneously, representing a double challenge for PAHO's TC, and particularly for MSs themselves. 8. Political instability reduces the sustainability of TC actions on the HWF and, in some cases, limits the ability to develop long-term planning scenarios.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 5. Support MS in integrating HWF planning, training, and surge capacity mechanisms into national and regional emergency preparedness and response systems.

Dimension	Evaluation question	Findings (phases 1 and 2)	Conclusions	Recommendations (if applicable)
	Which strategic TC actions should PAHO focus on to strengthen the HWF in MSs and advance universal access to health and universal health coverage?	PAHO should prioritize long-term planning horizons of 10–15 years, actively involve operational leaders in curriculum design, and adopt a clear position regarding the unregulated growth of the private sector in education and employment.	6. Countries have high expectations of a quantitative and qualitative increase in PAHO's TC on the HWF in the future. 9. Historical challenges related to HWF distribution persist, particularly in highly vulnerable areas, and there are currently no solution proposals applicable across the entire Region. 11. The political, economic, social, and health context of the Region is generating new challenges and strategic priorities for HWF development and for the role of TC.	2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements. 4. Strengthen regional cooperation mechanisms to address HWF issues, support evidence-informed policy dialogue, and promote ethical and sustainable workforce mobility arrangements.
	What mechanisms are in place to enhance the sustainability of gains achieved through PAHO's TC on the HWF?	This dimension received the lowest sustainability score (3.5). Projects were reported to frequently collapse in the absence of external financing, due to state budgetary constraints and changes in government.	8. Informants consistently identified the constant rotation of officials within ministries as a critical problem, as it interrupts policy development and forces processes to restart under each new administration. This dynamic creates significant barriers to the continuity of TC and of programs implemented in collaboration with MoHs. 3. However, government informants also identified structural adjustments in PAHO country offices as a factor affecting TC.	1. Progressively strengthen support to MSs in implementing, institutionalizing, and monitoring HWF policies and interventions, while maintaining a comparative advantage in diagnostics, planning, and policy development. 2. Strengthen national and regional HWF governance and planning systems through improved labor market intelligence, workforce projections, career pathway frameworks, retention strategies, and multisectoral governance arrangements.

Note: HWF, health workforce; MoH, ministry of health; MS, Member State; PAHO, Pan American Health Organization; SDG, Sustainable Health Goal; TC, technical cooperation. The numbering used in the conclusions and recommendations columns refers to the corresponding numbered conclusions and recommendations in the main report. These identifiers are used to support traceability with the evaluation dimensions and questions.

The evaluation of the technical cooperation of the Pan American Health Organization (PAHO) on the health workforce in the Region of the Americas assessed the relevance, coherence, effectiveness, efficiency, and sustainability of this technical cooperation during the period 2018–2024. The evaluation examined PAHO's contribution to strengthening health workforce governance, planning, education, regulation, migration, and emergency preparedness across the Region.

Conducted by an independent external evaluation team using a mixed-methods and theory-based approach, the evaluation combined document review, stakeholder interviews, an online survey, and country case studies in Brazil, Guatemala, and Guyana. The evaluation also incorporated cross-cutting perspectives related to gender, equity, interculturality, disability, and human rights.

This publication identifies key achievements, challenges, lessons learned, and opportunities for strengthening the support that PAHO provides to Member States for addressing persistent and emerging health workforce challenges. It also presents evidence-based recommendations aimed at enhancing implementation support, strengthening governance and workforce planning systems, expanding education and lifelong learning opportunities, addressing workforce migration, and improving preparedness for future health emergencies.

Essential reading for policymakers, health leaders, and workforce stakeholders, this publication underscores the central role of the health workforce in building resilient health systems and achieving universal health coverage, while offering recommendations to strengthen governance, planning, education, and technical cooperation across the Americas.

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