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THE ESSENTIAL PUBLIC HEALTH FUNCTIONS IN THE AMERICAS

A RENEWAL FOR THE 21st CENTURY

Conceptual Framework and Description

PAHO Pan American Health Organization
World Health Organization
REGIONAL OFFICE FOR THE Americas

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FOREWORD

"Leave no one behind" is a transformational principle to achieving the Sustainable Development Goals (SDGs) and the axis of the *Strategy for Universal Access to Health and Universal Health Coverage*. The emphasis of this principle is on promoting national health policies with concrete and viable strategies and actions that ensure equity and enjoyment of the right to health for all. To achieve this inclusive vision, we must first update our approaches and use tools to help us identify and evaluate the new capacities we need for ensuring universal and equitable access to all the interventions necessary for improving population health. This document presents work done to update the field of public health with a view to addressing the public health challenges of the Region of the Americas, with full, explicit use of the principles of equity in health as a cornerstone of this proposal.

We know that public health encompasses a range of activities aimed at addressing collective health needs and problems, as well as their causes. This not only seeks to ensure the provision of public services and public goods essential to protecting the health of the community, but also includes working on the social determinants of health and setting criteria and parameters to guide the strengthening and reform of health systems. However, recognizing and achieving public health contributions is no easy feat. Improving the health of communities, considering the specific and differentiated needs of different population groups, can only be achieved through interrelationships between the health sector and other development sectors. There is also a need for a more comprehensive outlook on public health, as well as to strengthen its essential functions to meet the challenges of the 21st century.

The COVID-19 pandemic, a disease caused by a new coronavirus (SARS-CoV-2), which has currently spread to the 54 countries and territories of the Region of the Americas since the first cases were reported in January 2020, is an unavoidable example of the need to strengthen the essential functions of public health (EPHF). The daily lives of all people around the world have been altered in a way that is unprecedented in recent history. The pandemic highlights the gaps in the response capacity of health systems, whose level of fragmentation and inequity prevent an effective response to the health needs of the population, even under normal conditions.

Consequently, the most vulnerable sectors of the population have been disproportionately affected by COVID-19. It is therefore necessary to support Member States in developing comprehensive plans and policies to strengthen the essential public health functions as a health-sector and intersectoral agenda.

Within this context, we welcome the timely publication of this conceptual framework and description of the EPHFs in the Americas. This renewal of the EPHFs supports the objectives and spirit of the SDGs and the *Strategy for Universal Access to Health and Universal Health Coverage*, by providing a guide which Member States can use to develop integrated public health policies through intra- and intersectoral strengthening at the various levels of policy-making. Adaptable to the context and needs of Member States, this document introduces a new paradigm for public health that will be complemented by a specific tool, developed to support governments in assessing their capacity to carry out public health actions and build policy options to strengthen health systems that recognize and prioritize public health actions.

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Ernesto Báscolo, Regional Advisor on Governance, Leadership, Policy and Planning for the Health Services and Access Unit (HS/HSS), coauthored and was in charge of conceptual development of the content of the proposal, as well as the coordination of meetings with stakeholders, experts from schools of public health, public health professionals from Member States, and PAHO experts. Natalia Houghton, Specialist, Health Systems and Services Analysis, Monitoring and Evaluation (HS/HSS), coauthored the proposal and acted as a co-facilitator for the technical meetings.

We are especially grateful to Ximena Aguilera (Director, Professor, and Investigator, Universidad del Desarrollo de Chile) and to the entire team of consultants at Universidad del Desarrollo for their invaluable contributions during review of this document.

This document was developed considering different existing typologies of the essential public health functions (EPHF), including that of the international Delphi study conducted by the World Health Organization; that proposed by the United States of America; that proposed by the U.S. Centers for Disease Control and Prevention (CDC); and that proposed by the Latin American Center for Health System Research (CLAISS) and PAHO. To assist in this endeavor, various instruments published by national and international organizations that have previously conducted assessments of public health services and capacities were used as references. The development of this proposal also included alignment with current PAHO resolutions, standards, and key technical cooperation strategies.

Experts in several fields have made substantial contributions to the development of this proposal. First, this document draws on the experiences and contributions of the teams and staff members of the national ministries of health of Argentina, Bolivia, Costa Rica, the Dominican Republic, Ecuador, and Panama, who took part in national workshops on this conceptual proposal between 2017 and 2019.

Second, this proposal incorporates the contributions of public health experts from the Region of the Americas who are recognized for their outstanding academic or professional trajectories in the field and proven experience as key opinion leaders and decision-makers in the field of public health. This panel of experts took part in two sequential activities. The first was an in-person workshop held in Bogotá, Colombia, in August 2018, where they discussed the key components of a conceptual framework for the EPHF, including definitions, groundwork, structure, and scope of the areas of intended action. This was followed by a modified Delphi-type survey, conducted between October and December 2018, to explore areas of consensus in the development of the document.

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Third, this review was conducted and supplemented with the experience and opinion of an interdepartmental team of PAHO experts, made up of coordinators from all departments and technical areas of the Organization which are somehow involved in the lines of action of the EPHF: Communicable Diseases and Environmental Determinants of Health (CDE); Evidence and Intelligence for Action in Health (EIH); Health Systems and Services (HSS); Family, Health Promotion and Life Course (FPL); and Noncommunicable Diseases and Mental Health (NMH). These experts took part in workshops held in July 2016, August 2017, and November–December 2019 at PAHO headquarters in Washington, D.C., which consisted of plenary sessions during which current public health challenges, lessons learned from the previous EPHF agenda, and the main conceptual dimensions of the guiding role of health authorities in the exercise of public health were discussed.

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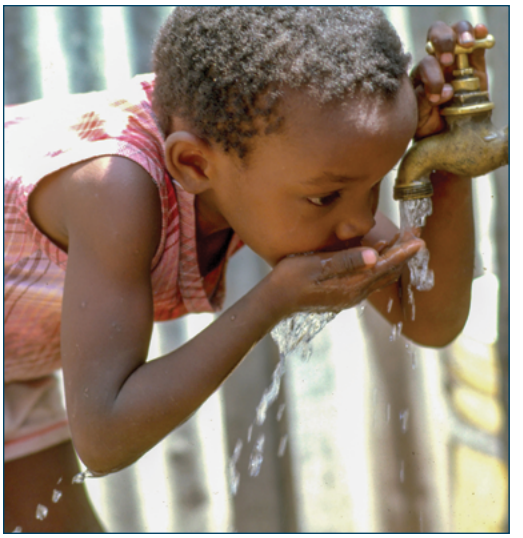
INTRODUCTION



The essential public health functions (EPHFs) have constituted the core of the agenda for strengthening the health sector in the Region of the Americas since the 1980s. Their conceptual development and measurement in the Region came in response to sectoral reforms that threatened to reduce the role of the State and public health, particularly the stewardship function of the health authorities *(1)*. In that context, in 2000, the Member States of the Pan American Health Organization (PAHO) proposed to promote a conceptual and methodological framework for public health and its essential functions, giving rise to the regional initiative called *Public Health in the Americas (1)*.

As part of this initiative, the essential functions of public health authorities were identified, their relevance was discussed, and a broad regional consensus was reached *(2-6)*, as explained below. More than 15 years have passed. In response to current needs, this document reviews and updates the EPHF conceptual framework for the Region of the Americas. This new version is based on the experiences and lessons learned from the implementation and regional measurement of the EPHFs, new and persistent challenges for the health of the population and its social determinants, and new institutional, economic, social, and political conditions which affect the Region of the Americas.

The document is structured into five sections. The first section presents the key experiences and challenges that justify a renewal of the EPHFs. The second section updates the groundwork for the exercise of public health that provides a framework to inform the exercise of the new essential functions. The third section proposes a new integrated approach for implementation of the EPHFs. The fourth section presents a new list of 11 EPHFs related to each stage of this integrated approach. Finally, in the last section, considerations are put forth to guide EPHF implementation as a means of strengthening the health sector.

The essential public health functions in the Americas: background

The essential public health functions (EPHF) initiative was promoted in the 1980s by the U.S. Institute of Medicine (now the National Academy of Medicine) in response to a weakening of public health in the country, proposing three core functions: assessment, policy development, and assurance. The intention was to define these as fundamental State functions, to ensure the efficiency and effectiveness of the country's public health service programs *(6)*.

Based on these recommendations, different national, regional, and global initiatives were developed. For example, the U.S. Centers for Disease Control and Prevention (CDC) defined 10 essential public health services in 1994 *(7)*, and the World Health Organization (WHO) conducted a Delphi survey that culminated in the first global list of EPHFs in 1997, aiming to help establish an international consensus on public health priorities and assure a bare minimum provision of these services in developing countries *(8)*.

During the 1980s and 1990s, almost all countries in the Region of the Americas initiated (or considered initiating) health sector reforms with the aim of improving health equity and access and the efficiency of health services, focusing primarily on structural and organizational changes in health systems, including changes in the provision of care services *(1, 9, 10)*. However, the strengthening of the stewardship role of health authorities, with the exercise of public health as a social and institutional responsibility, was largely neglected, precisely when it was needed the most *(1, 10)*.

In this context, in the year 2000, PAHO Member States decided to promote a conceptual and methodological framework for public health and its essential functions in the Americas to strengthen the stewardship role of public health authorities *(1, 4, 10, 11)*. In 2002, PAHO presented the preliminary conceptual and methodological version of the EPHFs for the Region of the Americas in the book *Public Health in the Americas (1)*.

The initiative was a great milestone in the development of institutional capacity in the countries of the Region. For example, countries and territories such as Costa Rica, Cuba, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Puerto Rico, the Netherlands Antilles, and the English-speaking Caribbean used the methodological approach proposed in 2002 to diagnose needs for institutional strengthening and to implement health system improvement plans *(1)*. This process also encouraged cooperation strategies and actions, such as those carried out within the framework of the Health Services Network of Central America and the Dominican Republic (RESSCAD), the Andean Community, and the Southern Cone Common Market (MERCOSUR) *(1)*.

Over 15 years later, several countries have adapted the instrument to their local conditions. Brazil, for instance, adapted the original PAHO tool to its decentralized health system, redefining the 11 functions and implementing evaluation programs in several states to support management and decision-making *(12)*. Between 2001 and 2007, Colombia, Costa Rica, Cuba, the Dominican Republic, El Salvador, Guatemala, Honduras, Panama, Peru, and the Eastern Caribbean states also continued to work on the EPHFs *(13)*.

Up to 2017, Argentina *(11)*, Chile *(14)*, Colombia *(15)*, Costa Rica *(16)*, and Panama *(17)* carried out local and provincial exercises that have identified opportunities and challenges to revitalize and improve the exercise of the EPHFs, incorporating training programs *(11, 18, 19)*.

PART I

WHY DO THE ESSENTIAL PUBLIC HEALTH FUNCTIONS NEED TO BE UPDATED FOR THE AMERICAS?

Changes in the public health landscape

The first rationale for reviewing and updating the approach to the essential public health functions (EPHFs) stems from the need for a more holistic vision of public health to address the challenges of the 21st century. The emergence of infectious diseases represents a growing threat to the health of the population, something that should be considered as a core component of the agenda for the improvement of public health at the national, regional, and global level. There are major, recent precedents—within this century—for the immense challenges faced in responding to the COVID-19 pandemic, which should not be ignored. These include the 2009 A(H1N1) influenza pandemic, the 2014–2015 Ebola virus disease outbreak in West Africa, and the introduction of chikungunya virus (2013) and Zika virus (2015) in the Americas *(20)*. In all cases, the emergence of disease outbreaks challenges the health system's responsiveness to ensure access to high-quality health interventions.

At the same time, there are political, social, and economic determinants of the health and health equity of populations that have traditionally been outside the scope of public health action *(21)* and require innovative responses. The socioeconomic and political changes that have occurred since the development of the EPHFs in 2002 led to the emergence of new public health issues with high prevalence and associated costs, which increasingly demand that health systems be better prepared to respond to the challenges posed by health problems and their determinants *(11, 20)*.

Aging and new epidemiological and socioeconomic conditions have led to an increase in noncommunicable diseases, mental illness, disabilities, traffic injuries, and domestic and interpersonal violence; these are now the foremost health problems requiring an intersectoral approach and the strengthening of social security systems and health systems *(20)*.

Moreover, irregular and forced migration, primarily due to economic factors, illegal activities (drug trafficking, organized crime), armed conflicts, and violence, puts the populations affected by these displacements in conditions of vulnerability and at greater risk of suffering violence, abuse, injuries, and diseases; this is compounded by limited access to care and services. Climate change is another threat to public health that requires immediate attention *(20)*. The Region of the Americas is prone to natural disasters such as hurricanes, volcanic eruptions, earthquakes, and flooding, which often lead to loss of human life and damages to the natural environment and infrastructure *(20)*.

The integration of global markets and increased international flow of pathogens, information, markets, finances, and people brings growing challenges for public health policies and practice. For example, the epidemiological patterns of communicable diseases are changing, as more open travel and trade between countries has been accompanied by the spread of these diseases and their vectors *(22)*. Changes in international patent protection rules that affect access to essential drugs are another important factor *(23)*. These problems show the need for cooperation among countries and agencies in supranational spaces in order to address the social determinants of health in worldwide policies *(24)*.

Remaining public health challenges

The following reason to update the EPHFs is the worsening deterioration or neglect of public health in the Region, which continues to elicit social outcry *(11, 25)*. Interventions such as programs focusing on food security, drinking water, immunization, and communicable disease control have become deficient in recent years, as spending on them has gone down and these interventions have lost their perceived value *(26)*. In some countries of the Region, the burden of communicable diseases and the number of maternal and child deaths remain high, including deaths caused by nutritional deficiencies *(20)*. The persistence and reemergence of certain infectious diseases associated with poverty and socioeconomic and environmental changes, such as arboviral diseases and cholera, reveal a need to step up public health activities *(20)*.

The most important victories of the last two decades, such as reducing levels of extreme poverty and hunger, reducing mortality among 1-to-5-year-olds, and major advances in environmental sustainability *(20)*, are masked by the large gaps in these achievements, both between countries in the Region and between different population groups within a given country, perpetuating avoidable inequities in health *(20)*.

This is compounded by the persistent fragility of health systems in responding to the needs of the population, which has impacts on individual and collective health. Inadequate health surveillance, response, and information systems; poor implementation of prevention and advocacy strategies; a lack of health professionals; persistence of different barriers to access; and a pervasive lack of adequate infrastructure for existing health facilities, coupled with low investment, are major structural deficiencies that continue to be present in current health systems *(20, 27)*.

These deficiencies also show a lack of coherence and compliance capacity in the planning of public health activities, including a failure to link and coordinate individual health services with public health services *(20)*, and more broadly, the problems health authorities face when trying to operate in a coherent, systematic manner, with a comprehensive approach to their stewardship role within the health system *(28)*. Public health activities are usually managed by different government agencies that operate often incoherently under fragmented institutional structures, with different public health interventions and programs *(28)*. At the same time, many public health policies continue to be vertical, with an exclusive focus on specific diseases, and are not well coordinated with other related social fields. This limits their impact on the health of the population *(29)*. In such a scenario an integrated approach must be adopted to help individual public health programs achieve rigorous and consistent planning *(30)*.

Recent regional strategies on public health

In recent years, health authorities have adopted regional strategies that explicitly indicate strategic lines of action linked to the exercise of the EPHFs. These stress an approach centered on strengthening the capacity of the health authorities from a primary health care (PHC) perspective, understood as a comprehensive strategy for the organization and operation of the health system as a whole *(31)*, whose main objective is to achieve universal health *(31, 32),* based on comprehensive care and integrated actions aimed at promoting health, preventing disease, and implementing population-based interventions, thus extending the concept of health systems beyond the delivery of personal health care services.

The first of these key instruments in the exercise of EPHF is the *Strategy for Universal Access to Health and Universal Health Coverage*, approved by the Pan American Health Organization (PAHO) Member States in October 2014 *(33)*. The Strategy was developed in response to the persistent challenges facing the Region's health systems, particularly inequities in access and the emphasis on curative care at the expense of preventive care and health promotion to address health determinants *(33)*.

To address these challenges, the Strategy assumes that the response capacity of health systems must improve, expanding equitable access to comprehensive health services, understood to be "population-based and/or individual actions that are linguistically,

culturally, and ethnically appropriate, include a gender approach, and take into account differentiated needs to promote health, prevent diseases, treat disease [...], and offer the short-, medium-, and long-term care needed" *(33)*.

Furthermore, the Strategy advocates for the implementation of people- and community-centered care models and proposes the development of mechanisms for collaboration between government and nongovernmental sectors to address the social determinants of health *(11)*. In this regard, ensuring EPHF implementation is essential for achieving universal access, understood to be the "absence of geographical, economic, sociocultural, organizational, or gender barriers [...] that prevent all people from using comprehensive health services" *(33)*. This can be achieved if the EPHFs guide actions critical for improving public health and PHC-based health systems.

EPHF renewal is also motivated by the recent approval of the Resilient Health Systems framework during the 55th PAHO Directing Council in September 2016 *(34)*. This resolution, together with the *Strategy for Universal Access to Health and Universal Health Coverage (33)*, reflects the need to address the problems and challenges that health systems face in responding to disease outbreaks and disasters with direct impacts on population health, with comprehensive policy options beyond the limits of services dedicated to restoring health.

The health, social, and economic significance and disruptive implications of the global COVID-19 pandemic mirror a recent history of other epidemic events, such as the H1N1 influenza pandemic and the Ebola virus disease outbreak in West Africa. In the Region of the Americas, outbreaks of chikungunya fever and Zika virus disease, natural disasters (such as the earthquakes in Chile and Ecuador and Hurricane Matthew in Haiti and Bahamas), and the effects of climate change on health and the environment (such as in the Chaco region of Paraguay) have all revealed the fragility of national health systems.

These resolutions *(33, 34)* also offer guidance on policies to ensure that health systems have the capacity to respond and adapt to immediate and short-term risks to the health of the population. This framework also highlights the need for countries to strengthen the EPHFs as a means to strengthen health systems, including the core capacities listed in the International Health Regulations (IHR) (2005). In addition, it considers that efforts to achieve resilience in health systems should be expanded beyond strengthening the response to risks, disasters, and disease outbreaks and instead be incorporated within the framework of sustainable development as a component of social protection systems in the field of health, as well as to address other ongoing risks to the health and well-being of the population, including social instability and the growing burden of noncommunicable diseases.

In order to achieve sustainable improvements, an integrated approach is proposed which incorporates emergency preparedness and response, disaster risk reduction, disease surveillance and outbreak management, and strengthening the entire health system,

including with regard to health sector governance and regulation. The Resilient Health Systems framework stresses that it is essential to invest in the first level of care and to ensure that there is surge capacity, with the necessary supply of appropriate health workers and of financing, medicines, and health technologies, to allow a rapid upscaling of public health services during severe, rapidly progressing, or sustained health events.

Another important reference is the *Sustainable Health Agenda for the Americas 2018-2030: A Call to Action for Health and Well-Being in the Region (35)*, adopted in 2017 at the 29th Pan American Sanitary Conference. The Agenda sets goals, targets, and indicators to express the commitment of the countries to the pending and new public health challenges, and explicitly mentions the need to strengthen the EPHFs as a key element for strengthening stewardship and governance, that can be used in a cross-cutting way to strengthen the other objectives. The Sustainable Health Agenda for the Americas 2018-2030 also includes the *Strategy for Universal Access to Health and Universal Health Coverage (33)*, together with the Sustainable Development Goals (SDGs) *(36)* and the unmet Millennium Development Goals (MDGs).

Recent global strategies on public health

The international discussion on the need to strengthen the EPHFs was reinvigorated with the adoption of a Resolution on "Strengthening essential public health functions in support of the achievement of universal health coverage" by the World Health Assembly in late May 2016 *(37)*. The resolution promoted the need to strengthen public health capacity to manage the outbreak of Ebola virus disease in West Africa when it became apparent that health systems need to better serve the needs of the population *(38)*. It also renewed the impetus to capitalize on, streamline, and promote the EPHF agenda in the various WHO Regional Offices. The EPHFs were recognized as an important component for the achievement of universal health coverage (bolstering public health capacities and strengthening access to promotion, protection, and prevention services, among other contributions) and a sound approach to the analysis and institutional development of the IHR.

In that context, WHO has called for a more in-depth discussion of regional experiences with the EPHFs and their links to the IHR and health systems. The current emphasis on the resilience of health systems and Member States' compliance with the IHR affords an opportunity to emphasize how strengthening public health makes health systems resilient. Preliminary reviews show a clear overlap among many of the regional EPHF frameworks, health systems, and the IHR, which is backed by several practical examples of important public health events. These ties are very important for health systems planning; consequently, we should clarify and operationalize the links between the EPHFs, the IHR, and health systems strengthening *(38)*.

Likewise, the COVID-19 response Resolution adopted during the 73rd World Health Assembly in May 2020 *(39)* highlights the need for Member States "to put in place a whole-of-government and whole-of-society response [...] with a view to sustainably strengthening their health systems and social care and support systems," as well as their preparedness, surveillance, and response capacities. Within that framework, the Member States of WHO recognize the disproportionate impact of the COVID-19 pandemic on the most vulnerable populations, as well as its impact on progress with regard to health and development, and commit to ensuring the sustained operation of health systems, which is necessary for mounting an effective public health response to the COVID-19 pandemic and other ongoing epidemics, as well as to ensuring uninterrupted access to the individual and collective services that the population needs.

Furthermore, the Member States were called upon to implement national action plans that are comprehensive, age- and disability-sensitive, and gender-responsive, while ensuring respect for human rights and fundamental freedoms and paying particular attention to the needs of people in vulnerable situations, promoting social cohesion, taking the necessary measures to ensure social protection and the protection from financial hardship, and preventing insecurity, violence, discrimination, stigmatization, and marginalization.

The 2030 Agenda for Sustainable Development, adopted by the United Nations General Assembly in September 2015 *(36)*, marks another significant change at the international level since the *Public Health in the Americas (1)* initiative began. Achievement of all 17 of the Agenda's SDGs will require more integrated and collaborative approaches to address health improvement and tackle the causes of health inequities in the Region, with the understanding that health is a human right in all its dimensions. This road map requires health systems to take on a more decisive role in activities aimed at improving equity and the health of the population, and contribute to more consistency and synergies with the actions of other sectors, both at the national and local level *(36)*.

Addressing this task will require involving multiple sectors of government, the economy, and society at large, as well as tackling contemporary public health challenges. An updating of the EPHFs is thus part of a comprehensive and inclusive action to address specific goals of all the SDGs and contribute significantly to the health of the population.

This need is reinforced by other recent frameworks, strategies, and resolutions, such as the 2011 *Rio Political Declaration on Social Determinants of Health (40)* and the "Health in all Policies" Helsinki Statement of 2014 *(41)*. These instruments strengthen the social determinants of health approach, the systematic inclusion of all sectors whose activities impact these determinants, and the leveraging of synergies to avoid detrimental consequences for health. They are therefore relevant to the implementation of the EPHFs, helping to identify intersectoral actions and comprehensive public policies to move toward the right to health and achieve equity.

Finally, the recent Astana Declaration on Primary Health Care, approved in October 2018 at the 40th anniversary of the Declaration of Alma-Ata *(42)*, offers another incentive to review and update the EPHFs. This Declaration establishes a transformed vision of PHC-based health systems, explicitly indicating the need to boost the first level of care infrastructure and capacity, and prioritizing the EPHFs, disease prevention, and health promotion activities *(42)*. The declaration includes high priority topics for public health. It recognizes that PHC-based health systems should provide a broad range of comprehensive prevention, promotion, treatment, rehabilitation, and palliative care services, which should be accessible, equitable, high-quality, and comprehensive in order to meet the health needs of all people throughout the life course *(42)*.

PART II

PILLARS FOR UPDATING AND REVITALIZING THE SCOPE OF ACTION OF PUBLIC HEALTH

As our understanding of the causes of diseases—such as the social determinants of health—has improved, so the scope of public health has expanded its focus to cover various activities aimed at addressing the collective health problems and needs of the population and their causes *(21, 43)*. This broader perspective, for which the global and regional health agendas discussed in the preceding section explicitly provide, has not resulted in an analytical framework for public health and the essential public health functions (EPHFs) that would allow for effective involvement in terms of health authorities' lines of action and in collaboration with other State actors and civil society *(26)*.

This has given rise to intense debates on the operating limits of public health practice *(44)*, mainly as it relates to medical practice and, more recently, with other sectors beyond health whose activities nevertheless affect the health of the population. Key issues include the responsibilities of public, private, and individual actors; the governance structures needed to develop and monitor policies both within and outside the health system; and the integration of individual services with traditional public health services *(26)*.

However, the problem in defining the scope of action of public health does not revolve around disagreement over its fundamental objectives *(11, 21, 25)*. Protecting and improving the health of the population has been, and continues to be, the widely accepted mission central to all definitions of public health (Box 1). The challenge is then to give the field of public health operational meaning with sufficient recognition for its purpose and mission. Which, then, are the fundamentals for expanding the scope of the EPHFs and providing operational guidance to influence policy-making?

This section proposes four pillars for mounting a response, and explains the fundamentals of developing a new conceptual framework for the EPHFs:

- **Pillar 1.** Apply ethical values of public health to address health inequities and their causes.
- **Pillar 2.** Address the social, economic, cultural, and political conditions that determine the health of populations.
- **Pillar 3.** Guarantee universal access to comprehensive, integrated, individual, and collective public health services.
- **Pillar 4.** Expand the stewardship role of the health authorities to address public health challenges.

Box 1. The purpose of public health.

Most modern definitions of public health[a-c] are indebted to Charles-Edward Amory Winslow, who, in 1920, stated that "public health is the science and the art of preventing disease, prolonging life, and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing service for the early diagnosis and preventive treatment of disease, and the development of the social machinery which will ensure to every individual in the community a standard of living adequate for the maintenance of health."[d]

The 2002 *Public Health in the Americas* initiative based its definition of the EPHFs on the concept of public health as "collective intervention by the State and civil society to protect and improve the health of the people."[e] Within this context, the scope of action of public health was articulated through a list of EPHFs, understood as "the structural conditions and aspects of institutional development that permit better performance in terms of public health practice."[e]

This concept of public health sought to transcend fragmentary dichotomies, such as personal versus environmental, preventive versus curative, or public versus private services. In this regard, it offered a more comprehensive view by linking the responsibility of the health authorities to ensure the right to access population-based programs and services to prevent disease and promote health, as well as individual health care services.[e] It also expanded the limited notion of public goods with positive externalities for health, by incorporating semiprivate or private goods that have an impact on public health.[e]

a Significados.com [Internet]. Matosinhos (Portugal): 7Graus; c2013-2018. Significado de salud pública; [cited 2018 Nov 3]. Available from: https://www.significados.com/salud-publica.
b American Public Health Association — For Science. For Action. For Health [Internet]. Washington, DC: APHA; c2018. What is public health?; [cited 2018 Nov 3]. Available from: https://www.apha.org/what-is-public-health.
c CDC Foundation [Internet]. Atlanta (GA): CDC Foundation; c2018. What is public health?; [cited 2018 Nov 3]. Available from: https://www.cdcfoundation.org/what-public-health.
d Winslow CE. The untilled fields of public health. Science. 1920;51:23-33.
e Pan American Health Organization. Public health in the Americas: conceptual renewal, performance assessment, and bases for action. Washington, DC: PAHO; 2002.

Pillar 1. Apply ethical values of public health to address health inequities and their causes

For several years, but especially in the last two decades, evidence has shown that significant differences exist in the state of health of a population depending on a range of socioeconomic, geographic, ethnic, and gender-related attributes. The systematic dissemination of these differences has prompted changes in the health policies of governments and international agencies to include in their agendas guarantees of the right to health and equity as ethical—i.e., normative rather than merely descriptive—elements *(45)*.

The Universal Declaration of Human Rights is the primary ethical framework guiding the practice of public health *(21)*. Human rights and the right to health not only proclaim the right to health for all people, they also mandate States to "respect, protect, and attain" such rights in ways that promote the health of the population *(46)*. This approach puts the focus on socioeconomic inequities, unequal distribution of power, and denial of human dignity, all contributing factors to preventable diseases, premature death, and disability *(47, 48)*.

The World Health Organization (WHO) has adopted the principle of human rights and the right to health, which both focus on safeguarding human dignity and promoting social justice *(49)*. The PAHO Member States also did so in the *Strategy for Universal Access to Health and Universal Health Coverage (33)*, explicitly mentioning the right to health, solidarity, and equity as fundamental principles to guide the transformation and strengthening of health systems. To these three rights, the Sustainable Health Agenda for the Americas 2018-2030 *(35)* adds the principles of universality and social inclusion. This makes the agenda of social and sustainable development more comprehensive. More recently, national governments the world over ratified their political commitment to assuring the right of all people, without discrimination of any form, to the highest attainable standard of mental and physical health, as expressed in the Political Declaration of the 2019 UN High-Level Meeting on Universal Health Coverage *(50)*.

Considering the ethical framework of the current health agendas, it is essential that achievement of the right to health, solidarity, and equity in health become one of the core objectives of the exercise of public health, and thus guide and improve its practice. Based on the foregoing, the right to health is assumed as the right of every person to enjoy the highest standard of health, a key organizing principle of health systems *(51)*. Solidarity is the principle underpinning the social protection system, using redistribution mechanisms that set contributions according to people's ability to pay and the needs of the population. Equity refers to the absence of unjust, avoidable, or remediable differences among population groups in terms of health status and access to health and to healthy environments. This guides the prioritization of policy efforts and health interventions to meet the health needs of those in conditions of social and economic vulnerability *(51)*. Within that framework, the EPHFs should be regarded as the capacities for joint action by the health authorities and civil society in order to achieve these purposes.

Pillar 2. Address the social, economic, cultural, and political conditions that determine the health of populations

The journey of public health knowledge and practice has progressed towards a global consensus on the need to address the social, economic, cultural, and political conditions which affect the health of populations *(21)*. However, since these conditions are frequently outside the purview of the health sector, this type of response involves major institutional and political complexity *(21)*.

Recognition of the influence of factors outside the scope of action of the health sector was initially followed by its inclusion in previous versions of the EPHFs, from the approach to environmental public health as a determinant of health to greater development of public health services. On the other hand, the social determinants, as underlying and structural causes of the health problems of the population, received limited visibility and attention.

More recently, the advent of the concept of social determinants of health has made it so the public health agenda now incorporates the need to address social, economic, cultural, and political conditions that affect health, and how these conditions reproduce persistent, avoidable health inequities and detract from the achievements made in the Region *(21, 52-56)*. Issues such as globalization, urbanization, racial segregation, income distribution, and aging have been incorporated into national and regional public health agendas.

For example, the regional *Strategy for Universal Access to Health and Universal Health Coverage* recognizes the need to address the social determinants of health through intersectoral measures to ensure access to health for all, including not only access to health care, but also measures to tackle the social determinants of health and reduce health inequities.

Addressing the social determinants of health is also a component of PAHO's *Strategy and Plan of Action on Health Promotion within the Context of the Sustainable Development Goals 2019-2030*. This document recognizes that "the inextricable links between people and their environment are the basis for a socio-ecological approach to health" *(57)*. In this proposal, settings, which include schools, universities, housing, workplaces, markets, and other common spaces in urban and rural territories and communities, are addressed through interventions seeking to promote the health and improve the quality of life of the population, considering the diverse and multicultural aspects of communities, especially those who live in the most vulnerable conditions. Within this framework, governments take responsibility for developing health policies that address social justice and the harmful effects of unsustainable production and consumption. Local governments can play a key role in health promotion, through intersectoral approaches at all levels of government to reduce inequalities and inequities in health.

These PAHO strategies express regional and global support for expanding the scope of public health to address the social determinants and living conditions of the population that influence health and disease. These social determinants include not only the social conditions of settings inhabited by the population from a territorial standpoint, but also the structures and mechanisms of the State that provide social protection coverage to the population.

Pillar 3. Guarantee universal access to comprehensive, integrated, individual, and collective public health services

Debate and confusion surrounding the operational limits of public health are among the factors that have caused public health to recede from the collective consciousness, while its medical component—focused on personal health care services—has continued to gain prominence, becoming a nearly hegemonic presence in the health sector reform and strengthening agenda *(21)*. In this context, it is argued that the EPHF strengthening agenda should ensure access to comprehensive, public health services, both individual and collective, and be an integral part of health system reform or strengthening processes.

The concept of access to health used in this document defines it as "the capacity to use comprehensive, appropriate, timely, quality health services when they are needed," i.e., the definition adopted by PAHO Member States in 2014 within the *Strategy for Universal Access to Health and Universal Health Coverage (33)*. "Comprehensive" health services are understood as "population-based and/or individual services that are culturally, ethnically, and linguistically appropriate, have a gender approach, take into account differentiated needs in order to promote health, prevent disease, treat disease [...], and offer the short-, medium-, and long-term care needed" *(39)*.

It follows from the above that two questions must be answered: first, what constitutes comprehensive public health services?; second, how do the EPHFs relate to the functions of the health system and its process of transformation?

What constitutes comprehensive public health services?

The challenge in coming to this definition, both in academic and in political fora, revolves around the degree to which ensuring the delivery of individual health services can be regarded as a basic and essential function of public health *(26, 58)*. It is important to begin by acknowledging the link between individual and collective health services, given their impact on the health of the population. Although tensions between individual and collective health services may persist, it is now recognized that the two are inevitably and increasingly interdependent *(59)*. They share a common and final objective of maximizing health benefits for the largest possible number of people *(60)*.

It is acknowledged that public health includes the organization of comprehensive health services based on a defined population *(61)*. As noted above, comprehensive services are understood to be population or individually based actions to promote health, prevent disease, treat disease (diagnosis, treatment, palliative care, and rehabilitation), and provide the short-, medium-, and long-term care required *(33)*. Furthermore, individual and collective health services are public health interventions that seek to influence the social, economic, cultural, and political conditions that endanger the health of the population *(61)*.

The Region of the Americas has a longstanding record of public health services, arising from the establishment of the U.S. Centers for Disease Control and Prevention (CDC), and

based on promoting such services combined with population-based health promotion and prevention services, while also ensuring that people are linked to personal care when such care is needed *(6)*. The 2002 *Public Health in the Americas* initiative *(1)* took a more comprehensive approach by including population-based disease prevention and health promotion services as well as individual health care services. In that framework, ensuring and improving both types of services constitutes an essential public health function *(1)*.

From this perspective, public health services may be characterized by five levels of intervention. The first level includes interventions aimed at addressing the social determinants of health (e.g., poverty reduction and improvements to education). The second includes interventions that seek to change contextual factors that endanger health (e.g., access to clean drinking water and safe roads). The third consists of interventions with long-term benefits (e.g., access to immunization and screening services). The fourth consists of individual (or personal) care, and the fifth consists of health education interventions, which are usually arranged by health facilities to promote behavioral changes (e.g., to increase physical activity and encourage adoption of a healthy diet) *(62)*.

Generally, interventions at the first two levels have the greatest potential to improve the health of the population, but they require more political commitment since they involve more profound social transformations. Meanwhile, interventions at the last three levels involve individual health services that may have an impact at the population level if quality and universal access are guaranteed. Any comprehensive public health action should strive to ensure that measures are implemented at each intervention level in order to maximize synergies and the likelihood of long-term success.

Ensuring access to all public health activities—individual and population-based—at all levels of intervention is part of the scope of action of public health and of its functions. However, while a distinction can be made between individual and collective health services *(63)*, this does not mean they should be separate; on the contrary, both need to operate in an integrated manner to improve the health of the population *(1, 64, 65)*. In a practical approach to this relationship, different national and international actors have called for the integration of individual services managed through the first level of care with collective public health services, recognizing that they share the common objective of preventing disease and promoting the health of the population *(42, 66-68)*. In some areas, such as immunization and emergency preparedness, there is a long history of such collaboration. But there is a growing interest and need to make primary health care and collective public health services expand and deepen their ties in order to have a greater impact on the health of the population *(69-72)*.

How do the EPHFs relate to the functions of the health system and its process of transformation?

Even though the activities and interests of the health service delivery system and public health clearly overlap, the common perception is that the health system is synonymous with the medical service delivery system, and there is less recognition of the interaction that should and does exist between health care delivery and other public health activities. This reflects the current structure of most health systems in the Region, in which the separation of financial, institutional, and service delivery arrangements of public health services from those of individual care has contributed to significant fragmentation of health systems.

Since the 2002 version of the EPHFs, public health has been recognized as a component of the health system *(1)*, understood to be "all organizations, people, and actions whose primary intent is to promote, restore or maintain health" *(73)*. This includes an organized network of activities to influence the determinants of health and direct actions to improve health, regardless of whether they are carried out by public, state, non-state, or private agents *(1)*.[1]

The operational separation between public health and individual care is a result of the prevailing disease-focused model of care, acute care, and intra-hospital management, added to a concept of coverage that is restricted to preventive clinical services and a limited approach to the determinants of health *(74)*. As disciplines and professional fields, medicine and public health have evolved separately and diverged, with minimal levels of interaction, and frequently without recognition of the missed opportunities to improve individual and population health.

This situation undermines the legitimacy of public health, limiting both the resources and influence that public health has on public policies, and constituting a significant barrier to achieving a comprehensive and integrated approach. Under-appreciation of the value of public health in the organization and operation of service delivery systems is perhaps the leading cause of the low social effectiveness of health systems, the low levels of public satisfaction with the care received, and the failures of some sectoral reforms carried out in the last two decades *(74)*.

In view of the foregoing, it is important that any initiative to renew and revitalize public health and its functions identify the implications of this separation and advocate for better collaboration, addressing the social determinants of health, especially to ensure access to health interventions that prioritize prevention and partnerships, for broader health promotion efforts within the health system *(60, 74)*. Such an approach poses new

1 In ordinary use, the terms health system and health sector are almost interchangeable, especially when analyzing health sector/system reforms. If a health system is more narrowly defined (e.g., as the service delivery system), the health sector would include more providers and services. Conversely, the health system could include significant unassessed functions. At any rate, the health sector is defined as "the set of values, standards, institutions, and actors who carry out activities of production, distribution, and consumption of goods and services for the main or exclusive objective of promoting the health of individuals or population groups". See Pan American Health Organization. Public health in the Americas: conceptual renewal, performance assessment, and bases for Action [Internet]. Washington, DC: PAHO; 2002 [cited 2018 Nov 12]. Available from: https://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=10228&Itemid=270&lang=en.

challenges for the health authorities and for their implementation of the EPHFs, particularly with regard to their responsibility to make sure that the health care delivery system fulfills its public health responsibilities and steers providers and purchasers of health services toward fuller engagement in public health.

Public health can play an important role in having health systems promote prevention and healthy lifestyles. A focus on prevention and the social determinants of health can make invaluable contributions to the service delivery system *(60, 74)*. Recent experiences involving epidemics and public health emergencies, as exemplified by the COVID-19 pandemic, the H1N1 influenza epidemic, and the Ebola virus disease outbreak in West Africa, unequivocally show the need to integrate measures to strengthen health systems with efforts to ensure the availability of core capacities in public health—many of which are present in the IHR—as a strategy to ensure the integrated and continuous exercise of the EPHFs and the functions of the health system *(75, 76)* (Box 2).

The EPHFs, therefore, must be incorporated into a framework of health systems strengthening to help the health authorities develop comprehensive plans and policies that work in collaboration with the community and with the different agencies within and outside the health sector, thus reducing the current institutional fragmentation.

Box 2. The International Health Regulations and how they intersect with the essential public health functions.

Evaluation of the core capacities required by the International Health Regulations (IHR, 2005) as an international tool to help a community prevent and tackle public health threats[a] is useful from a conceptual and practical standpoint, as it helps visualize the intersections between the essential public health functions (EPHFs) and health system functions. A country's ability to detect, report, and respond to health threats requires strengthening of the components of health systems, as indicated in the World Health Organization (WHO) framework for strengthening health systems.[b] The stewardship function of the health authorities is essential to improve implementation of the IHR and to counteract outbreaks in general. This is the cornerstone of any effort to strengthen health security.

Basic and essential public health functions, such as surveillance and monitoring, are a central pillar of the IHR (2005) and they require contributions from the health system. The capacity to rapidly activate other basic components of the health system, which includes service delivery as well as human, financial, and technological resources, is a priority both during emergencies and to ensure strengthening of the health system itself. The way the services are organized, managed, and delivered is the most visible evidence of how the health system functions and whether it is efficient, particularly during a crisis. With regard to the IHR (2005), there is also a

need to improve coordination between public health service delivery systems and emergency clinical care.[b,c]

Collaboration with other stakeholders is also necessary, particularly in the private sector, to improve logistics during emergencies. Local health care providers and local communities, together with civil society, can also play a crucial role in the prompt delivery of key services. Medical products, vaccines, and health technologies are essential components of emergency response under the IHR (2005). Another critical issue for emergency response and preparedness is human resources for health, in terms of numbers and availability, relevant experience, training, and deployment. Finally, the importance of financing cannot be underestimated in IHR (2005) planning. Countries should invest in their public health, institutions, and infrastructure and in local laboratory and diagnostic services to identify the dangers and events that can lead to emergencies and possible outbreaks, as well as specialized personnel and supplies.[b,c]

These efforts help facilitate compliance with the IHR (2005) as an integral part of health systems, rather than as a set of externally imposed requirements. Recent mandates on primary health care[d] and universal access to health and universal health coverage,[e] as well as the 2030 Agenda for Sustainable Development,[f] call for strengthening health systems in order to improve access to public health services. These recent reference documents reinforce the expectation that public health is an inherent and priority component of the health system. Therefore, renewal of the EPHF initiative should operationalize coordination and specific components of a health system that includes and favors public health.

a World Health Organization. International Health Regulations (2005) [Internet]. 3rd ed. Geneva: WHO; 2016 [cited 2018 Nov 12]. Available from: https://www.who.int/ihr/publications/9789241580496/en.

b World Health Organization. Health systems, international health regulations, and essential public health functions. Report of the WHO Interregional Internal Working Meeting. Copenhagen, Denmark. 15-16 March 2016 [Internet]. Geneva: WHO; 2016 [cited 2018 Nov 12] (WHO/HIS/SDS/2016.13). Available from: https://www.who.int/servicedeliverysafety/areas/qhc/CopenhagenMeetingReport.pdf.

c World Health Organization. Strengthening essential public health functions in support of the achievement of universal health coverage [Internet]. 69th World Health Assembly; 2016 May 23-28; Geneva, Switzerland. Geneva: WHO; 2016 [cited 2018 Nov 12] (Resolution WHA69.1). Available from: https://apps.who.int/gb/ebwha/pdf_files/WHA69-REC1/A69_2016_REC1-en.pdf.

d World Health Organization; United Nations Children's Fund; Declaration of Astana. Global Conference on Primary Health Care: from Alma-Ata towards universal health coverage and the Sustainable Development Goals; 2018 Oct 25-26; Astana (Kazakhstan). Astana: WHO/UNICEF; 2018 [cited 2018 Nov 12] (WHO/HIS/SDS/2018.61).

e Pan American Health Organization. Strategy for universal access to health and universal health coverage. 53rd Directing Council of PAHO, 66th Session of the Regional Committee of WHO for the Americas; 2014 Sep 29-Oct 3; Washington, DC. Washington, DC: PAHO; 2014 (document CD53/5, Rev. 2).

f United Nations. Transforming our world: the 2030 Agenda for Sustainable Development [Internet]. Seventieth session of the United Nations General Assembly; 2015 Sep 15-2016 Sep 12; New York. New York: United Nations; 2015 [cited 2018 Nov 12] (Resolution A/RES/70/1). Available from: https://unctad.org/meetings/en/SessionalDocuments/ares70d1_en.pdf.

Pillar 4. Expand the stewardship role of the health authorities to address public health challenges

Nowadays, the view of public health as the exclusive purview of the State has been replaced with broad recognition that public health is multisectoral and requires coordination with other parts of the government, academia, the private sector, and other sectors not directly responsible for health in order to address increasingly complex health problems such as chronic diseases, aging, violence, and climate change *(21, 43)*.

This perspective is supported by previous PAHO calls for the expansion of social protections to meet the health needs and demands of civil society and tackle social exclusion in health, which should be addressed through public interventions that seek to ensure access to both existing health system services and interventions to mitigate the negative economic and social impact of adverse life events (such as disease or unemployment) or societal events (such as natural disasters) on the population, particularly on those most vulnerable *(77)*.

Recent regional and international resolutions, including the 2030 Agenda for Sustainable Development *(36)*, the Rio Political Declaration on Social Determinants of Health *(40)*, the Helsinki Declaration on Health in all Policies *(41)*, and the Declaration of Astana on Primary Health Care *(42)*, among others, unequivocally call for the health authorities to undertake and lead public health activities that must be carried out collectively by a variety of partners other than the health authorities and from outside the health sector.

Taken together, this highlights the need for stewardship not associated with a belief that the health authorities are self-sufficient or that they work exclusively through the Ministry of Health or its equivalent. On the contrary, their stewardship role is counterbalanced by collective action that includes other stakeholders from within and outside government *(71)*. Nonetheless, it is important to clarify that securing a commitment from other stakeholders in society does not in any way mean shifting the steering role away from health authorities when it comes to the exercise of public health. This stewardship plays a central role in ensuring that social actors take responsibility for the functions and activities assigned to them, and that they are held accountable for reporting measurable results.

Indeed, the transformations that health systems have undergone in the Region of the Americas in recent decades, including increased private-sector participation and a renewed emphasis on multisectoral action, have expanded the scope of action of health authorities beyond their traditional role in the administration of public-sector programs and services to include innovations and new capacities for the exercise of their steering role in resource regulation and management, intelligence activities, and empowerment of the people, among others. However, this expansion has been met with frequent staffing constraints, rapidly evolving and often competing international health priorities, and complex relations between state and non-state actors at the national and subnational levels.

To mount an appropriate response to current challenges, the health authorities must have specific capacities and abilities. These capacities are diverse, and include: structural capacities (such as the availability of decision-making mechanisms), capacities to take on the assigned functions (such as the power and legitimacy associated with these functions), personal capacities or individual competencies (such as technical, administrative, and interpersonal knowledge and skills), capacity to take on the assigned workload (such as sufficient staff and the availability of clear guidelines), performance improvement capacity (such as the allocation of necessary resources), and supervisory capabilities (such as the availability of reporting and monitoring systems, mechanisms to ensure transparency and availability of incentives, and sanctions to facilitate exercise of the assigned functions).

In 2017, PAHO defined stewardship as "the capacity of health authorities to lead and support joint action, which allows the creation, strengthening, or changes to governance structures in the health system" *(78)*. Governance, in turn, was defined as "the institutional arrangements that regulate the actors and critical resources that influence conditions of coverage and access to health services" *(78)*.

Accordingly, stewardship cannot be transferred to other social entities. It is essential that the government offer guidance to the sector and to public health policy, given its role as an active beneficiary of the social consensus on health, and in the exercise of its democratically conferred authority *(79)*. The health authorities should also strive for excellence in their work, as a means of encouraging groups working to solve public health issues to remain engaged and willing to so contribute to society. In this regard, public health actions are the specific or shared responsibility of multiple social actors, and the health authorities (see Box 3) should lead and ensure that the various actors involved make contributions that are in line with the construction of equitable public health systems and policies, with the ultimate goal of defending health as a social right *(79)*.

Accordingly, implementing the EPHFs should be regarded as fulfillment of the stewardship function of the health authorities, particularly given their leading role in creating the conditions to ensure, either directly or through other social actors, the strengthening of public health. In this regard, the EPHFs should be broad-based and versatile enough to be implemented at the different levels of authority and in different political and legislative contexts. This should be done systematically, encompassing not only all levels of authority, but all actors that participate in the promotion, prevention, restoration, and maintenance of health.

Box 3. The health authorities.

Health authorities are structurally different depending on whether the country is federal or unitary, and on how health sector institutions are organized.[a] The health authorities are understood as "the State organizations, entities, or actors responsible for protecting the public good regarding health."[b] The Ministry of Health, or its equivalent national health authority, is the principal authority having jurisdiction over the field of health and, in that capacity, the main entity responsible for leading the sector. Nevertheless, the level of decentralization of the sector's activities and the way responsibilities are distributed within the institutional structure of each country will determine the range of responsibilities of the national Ministry of Health.[c]

Within the structure of the State, other agencies and organizations within other sectors or jurisdictions (housing, education, finance, trade, social development, etc.) are indispensable to the sustainability of cross-sectoral initiatives that address the social determinants of health.[d,e] It is also necessary to consider both actors from subnational jurisdictions (provincial or municipal), who play a key role in adapting or implementing initiatives in local contexts, as well as non-state actors (civil society, organized or not, and private organizations, whether for-profit or nonprofit, with varying degrees of formality and visibility), which exercise social control, advocacy, and influence.[f,g]

a Pan American Health Organization. Función rectora de la autoridad sanitaria, marco conceptual e instrumento metodológico. Washington, DC: PAHO; 2007.
b Vega Romero R, Torres Tovar M. El papel de la sociedad civil en la construcción de sistemas de salud equitativos. Rev Cubana Salud Pública [Internet]. 2011 [cited 2018 Oct 26];37*(2)*:145-54. Available from: http://scielo.sld.cu/pdf/rcsp/v37n2/spu08211.pdf.
c Pan American Health Organization. Public health in the Americas: conceptual renewal, performance assessment, and bases for action. Washington, DC: PAHO, 2002.
d Pan American Health Organization. Guía para el mapeo de la autoridad sanitaria nacional. Washington, DC: PAHO; 2005.
e Pan American Health Organization. Steering role of the national health authority: performance and strengthening. Special Edition No. 17 [Internet]. Washington, DC: PAHO; 2007 [cited 2018 Nov 12]. Available from: https://www.paho.org/hq/dmdocuments/2010/Steering_Role_NHA.pdf.
f Báscolo EP, Yavich N, Denis JL. Analysis of the enablers of capacities to produce primary health care-based reforms in Latin America: a multiple case study. Fam Pract. 2016;33*(3)*:207-18.
g Hufty M, Báscolo E, Bazzani R. Gobernanza en salud: un aporte conceptual y analítico para la investigación. Cad Saude Publica. 2006;22(Suppl):S35-S45.

The expansion of the scope of action of health authorities and the inclusion of other actors also entails the need for an intersectoral approach. This means that various sectors—not exclusively governmental—must act in coordination to meet social needs and prevent health problems that have complex, varied, and related causes. It means that sectors must work together to change the current situation. It also involves collaborative, non-hierarchical, and even non-contractual relationships and coordination between sectors. The latter is particularly important to gathering and leveraging limited resources, avoiding duplication of effort, and using the talents and assets offered by each partner *(80)*.

This expands the scope of public health and its functions, increasing the need for coordination between the health sector and other sectors of the State, academia, the private sector (paying close attention to potential or actual conflicts of interest), and other sectors whose work has an impact on health. This intersectoral approach is crucial for addressing the social determinants of health that impact living conditions and health/disease processes in the population. Expanding the scope of EPHF activity beyond the health sector is based on a recognition of the growing complexity of the population's health conditions, explained by social determinants, as well as the intersectoral actions by the State to influence these determinants.

WHO has been promoting intersectoral approaches to health since the Alma-Ata Declaration in 1978 *(81)* with important recent milestones, including the Adelaide Statement on Health in all Policies *(82)*, the Political Declaration of the United Nations General Assembly on the prevention and control of non-communicable diseases *(83)*, the Rio Political Declaration on Social Determinants of Health *(40)*, the Helsinki Statement on health in all policies *(46)*, and the Astana Declaration that reaffirmed the global commitment to PHC *(42)*. During the past few decades, the models and structures for intersectoral action have become very broad and heterogeneous in the countries of the Region of the Americas *(84)*. This has conceptual and operational implications for the EPHFs, as well as the degree to which the health authorities can (or should) lead the planning and implementation of intersectoral work for health. Depending on the issue being addressed, five different types of interventions with intersectoral effects can be described (Table 1).

Table 1. Types of interventions involving intersectoral approaches for health.

1. Intersectoral action promoted by services in direct contact with the population
At the territorial level, intersectoral coordination activities are promoted from management and health service delivery settings in which the health authorities take on a stewardship role in coordinating interventions impacting the living conditions of a particular community. The territorial approach allows characterization of the living conditions of a community, its demographics, culture, labor conditions, social infrastructure, etc. In these cases, leadership by the health authorities is justified by the fact that the health sector has the highest level of knowledge, experience, and control over strategies to improve equity in access and health outcomes. These intersectoral initiatives are focused on reconfiguration of the form and scope of health interventions. They are generally oriented to strengthening the problem-solving capacity of the primary level of

care, incorporating promotion and prevention services, either by expanding the multidisciplinary nature of health services or by expanding social participation in priority-setting and/or implementation.

In such cases, effort is made to make the model of care more responsive to the needs of people, families, and communities and thus improve equitable access to comprehensive health services.[a] Some of these coordination activities seek to facilitate access to different kinds of social services and ensure or facilitate their continuity, primarily to meet the needs of people in conditions of vulnerability who require professional social services and health care. Also, in intersectoral activities, the community plays an active role in public health interventions promoted through primary care. These include the creation and training of teams of community health workers, who have been a key to the success of many efforts to improve health indicators.[b] Furthermore, opportunities have been created for social participation involving a variety of interests, including health forums, health/disease approaches, and alternative policy-making.

2. Intersectoral action to improve the health of the population directly

These are intersectoral initiatives that have as their main objective the improvement of health outcomes. In these cases, health authorities have an important stewardship function while ensuring close collaboration with other sectors. Some of these actions are aimed at specific population groups and at promoting rights in a comprehensive way to specific segments of the population.

Examples include health promotion programs at schools, programs to fight violence, early child development programs, and aging policies. These initiatives take an intersectoral approach to creating conditions for the good health of these populations. Additional examples can be found in the field of environmental public health, e.g., when seeking to reduce human exposure to air pollutants or during a chemical emergency.

In such programs, health authorities take the lead for their central role in the supervision and coordination of social and health services or contribute strong articulation and support from the health sector.

3. Intersectoral action to expand social protection systems

This type of initiative is based on emerging social protection systems with a comprehensive and rights-based approach that requires collaboration between different governmental sectors and levels of government in order to move toward a comprehensive social protection system. These initiatives articulate policies that seek to ensure social welfare through the establishment of benefits, transfers, and services for especially vulnerable populations and to expand the coverage of benefits and social services related to working life, as well as to promote a strong structure of opportunities in the field of labor market regulation and employment, income, and credit access policies for social promotion.[c]

In these cases, the health authorities play a leadership role to the extent that these policies have explicit health-related objectives, either as risk events that have implications for social protection systems or on certain social conditions (poverty) or demographics (children or the elderly) that have consequences for the health of the population. In this case, the relationship between the health sector and other sectors is complemented by the regulatory mechanisms of the social protection systems and the inclusion of specific health benefits and beneficiaries through initiatives to extend coverage.

Another type of intersectoral action seeks to coordinate and integrate social policies to combat poverty and expand access to basic services. Examples include the conditional cash transfer programs that emerged starting in the 2000s, such as Chile Solidario and the Oportunidades program in Mexico.[d] In such cases, the health sector is aware of effective measures to improve health but does not have control over the situation or lacks the means to implement measures. The health authorities can take the lead in promoting strategies but must ensure close collaboration with other sectors and get them to take ownership of the initiative. The problem underlying these initiatives is the need to integrate social policies and improve their effectiveness. Therefore, these are characterized by the creation of State entities or structures, such as divisions, agencies, or mechanisms, in which coordination and collaboration is sought around activities, resources (economic, organizational, social, and political), and actors linked to different sectors and institutional jurisdictions of the State.[e] These innovations result in integrated benefit programs aimed at specific population groups, with a unique institutional character and local implementation.

4. Intersectoral action to address a health determinant

Such initiatives are aimed at improving health outcomes through specific risk factors and environmental determinants. Examples include the development of infrastructure (drinking water, sanitation, clean energy) and the regulation of goods and services (alcohol, drugs, and tobacco) that have an effect on health and that are governed by other institutional sectors (e.g., trade, agriculture, housing, industry, transport, energy). In such cases, the advocacy and technical capacity of the health authorities are key factors for wielding greater influence over these regulatory spaces that were previously under the exclusive purview of other areas of government (ministries of finance, trade, or agriculture).

This kind of intersectoral mechanism broadens the stewardship of the health authorities, expanding their scope of action and influence on the agenda of other State policies to achieve a shared objective and offer an integrated State response to specific problems.[f] These interventions seek to strengthen governance for health,[g] which, in turn, seeks to influence regulatory mechanisms that have an impact on the health of the population beyond the scope of the health sector. Health authorities, at all levels, play key roles in facilitating such actions: *(1)* as coordinators of the analysis and communication of the health status of the community and its causal or associated factors; and *(2)* as conveners and facilitators of independent, collaborative actions by other organizations and sectors.[h]

5. Intersectoral action to address the social determinants of health

This type of initiative focuses on addressing structural socioeconomic factors that compromise health, even though some determinants are not necessarily under the direct control of the health sector. Some examples are quality of education, the strength of the labor market, workplace safety, and the quality of neighborhoods.[i-q] In these circumstances, the main function of the health authorities is to act as a partner in the development and implementation of the initiatives, since the health sector alone does not control the means for implementing these strategies, nor does it have the most knowledge about how the activities should be framed.[r]

This type of intersectoral action usually occurs at the macro (national) level, but it also includes activities at the regional and local levels. Local governments often have direct influence on factors that impact health and health equity, through health promotion and land management processes, such as transportation and land use policies.[s] Local health authorities can lead joint actions by bringing together community stakeholders

and other governmental sectors as partners in health promotion activities, programs, and policies.[b] These community health programs are a critical investment for extending access to public health services.

In addition, the health system itself can also be regarded as one of the social determinants of health, insofar as its institutional architecture defines population coverage and access to the health services, with obvious impacts on the health conditions of the population. Although health authorities are the stewards of the health sector, a sector-wide coordination effort is required, as many of their own institutional arrangements require intervention by other sectors. In this context, one may acknowledge that, e.g., the financing model requires intervention by the finance, economic, and labor sectors. The regulation of human resources requires the participation of the education sector, the regulation of health technologies depends on rules and regulations derived from the science and technology and trade sectors, and so forth.

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PART III

AN INTEGRATED APPROACH TO STRENGTHEN PUBLIC HEALTH AND ITS FUNCTIONS

The rationale discussed above denotes that public health approaches have shifted from a focus more centered on aspects related to disease surveillance/control and environmental determinants to a broader approach which considers the context of public health equity and social determinants of health.

The arguments advanced above also reinforce the notion that the practice of public health should be guided by a framework of widely accepted values. This framework must stress the right to health and the fundamental idea that public health is a collective effort, with responsibility shared by the State and civil society, aimed at protecting and improving the health of the population through population- and community-based interventions, but also through access to quality health care *(11, 21)*.

Despite the difficulty of summarizing all of these aspects in a single concept, this proposal defines public health as the practice and field of knowledge of collective action in which the State, together with civil society, protects and improves the health of the population and guarantees the population's right to health.

The inclusion of public health practice and knowledge denotes the need to add the evidence base and output of academia in the field of public health to the interventions and practices already carried out by the State, in conjunction with other social actors, to improve the health of the population. As it is the purpose of these actions, the right to health must thus be a core element of the conceptual framework.

The functional expression of this definition and purpose of public health is translated by the EPHFs, understood as the capacities of the health authorities, at all institutional levels, to act with civil society to strengthen health systems and ensure the full exercise of the right to health, by acting on the risk factors and social determinants that impact the health of the population.

This definition regards the EPHFs as capacities of the health authorities, rather than the mere existence or performance of health interventions required for the exercise of the EPHFs. For this reason, the proposal has an institutional perspective in terms of the capacities of the State and society to carry out essential functions to protect the health of the population.

Another component that stands out in this definition is that it recognizes health authorities as the actors primarily responsible for the exercise of the EPHFs at all institutional levels. This consideration reinforces that execution of the EPHFs is part of the stewardship role of health authorities. In addition, the need to consider all institutional levels means action by health authorities, not only the national level, but also subnational level, including provinces and municipalities, depending on the institutional political structure of each State.

However, it is not enough that the health authorities be responsible for exercising the EPHFs; the participation of civil society is required. This proposal reinforces an approach, already highlighted in previous versions, of forgoing consolidated leadership by the health authorities and building partnerships to achieve the integration and coordination of their public health activities. This vision recognizes that, while it is the State, and especially the health authorities, that must take on primary responsibility for the exercise of the EPHFs, part of these same responsibilities is to promote the inclusion of civil society actors to participate in this exercise.

Two relevant components accompany this definition: the full exercise of the right to health as the central purpose of the exercise of the EPHFs and the inclusion of social determinants as part of the object of intervention, both of which are incorporated into this proposal and demand a multisectoral and integrated approach.

Integrated model based on the policy cycle

The need for an approach to public health functions that is based on the policy cycle has been recognized since the emergence of the EPHF initiative in the Americas. In 1988, the Future of Public Health report of the U.S. Institute of Medicine (now the National Academy of Medicine) pioneered an understanding of public health as a policy cycle, organized into three stages: *(1)* assessment, which includes evaluation, research, and analysis of health needs, health risks, and their determinants; *(2)* policy development, which includes advocacy, priority-setting, and planning of public health policies; and *(3)* assurance, which

included resource management and program implementation to ensure access to the public health services *(6)*. The participation of the health authorities in such activities results in greater emphasis being placed on disease prevention and health promotion *(85)*. While the 1988 report was revolutionary because many health departments were not structured around these central functions, most of the agencies and institutions that operate as health authorities have still not been able to consistently use an integrated approach to their functions, or ensure sufficient financing to support operations *(85)*.

As a result, public health functions still reproduce two structural problems: they are fragmented and have low priority and impact within agendas for health system strengthening and reform.

This fragmentation is manifested as the presence of various government agencies or programs with responsibilities in the development of public health interventions or programs, embedded within many health departments operating under different institutional structures, and in an uncoordinated, often inconsistent approach. By the same token, many current public health policies, particularly those related to specific diseases, continue to focus exclusively on certain diseases, with little coordination with other related social fields and with limited impact on the health of the population *(86)*.

Regarding low priority and limited advocacy on health system strengthening agendas, it must be noted that these were core arguments that supported the first EPHF proposals. Although these proposals—focused on promoting public health interventions as opposed to the agendas for reforming health insurance and provision of medical services—achieved visibility, their course remained parallel to that of the aforementioned agendas, and they were disadvantaged from the start by less attention and lower priority.

In this setting, it is necessary to strengthen an approach that allows public health services to be prioritized in a way that integrates them into the health system strengthening agenda. This new integrated approach, based on the policy cycle, contains two important innovations.

First, the foundations that were previously presented to justify a renewal of the EPHFs include ensuring access to all public health actions, both individual and collective. In this vision, all levels of public health intervention—whether collective or individual—must be considered part of the scope of action of public health and its functions *(62)*. For this reason, an integrated approach to both types of interventions not only broadens the scope of action, but is also part of the integrated approach proposed to improve the health of the population within the framework of health system strengthening *(1, 64, 65)*.

Second, the policy cycle proposal is organized into four stages as follows: *(1)* assessment; *(2)* policy development; *(3)* allocation of resources; and *(4)* access (Table 2).

Figure 1 provides a graphic depiction of these stages. The process starts with assessment, which analyzes the population's health problems and their causes, and limitations on health system response capacity to address them. This evidence becomes an input for policy development on health and social matters. This is followed by the policy development stage, in which the health authorities, through dialogue with civil society and the community, determine lines of action to address health problems and their causes. The allocation of resources then refers to the various critical resources (staffing, technology, funding) of the health system that should be allocated to strengthen the health system's responsiveness to the health problems of the population. The cycle ends with the access stage, expressed as conditions of equitable and universal access to health.

The innovations of the latter two stages are noteworthy. The introduction of a third stage, concerning resource allocation, accounts for the need to provide relevance and visibility to the capacity to generate and sustain resource allocation mechanisms, which should be separate from policy-making processes. Without sufficient resource allocation—i.e., with insufficient human resources, technology and funding—policy development has little influence to ensure access to health.

Figure 1. An integrated model of public health

Source: Partially adapted from Institute of Medicine, Committee for the Study of the Future of Public Health. The future of public health. Washington, DC: National Academies Press; 1988.

Note: *The first two stages (assessment and policy development) are linked to those originally defined by the Institute of Medicine. The third and fourth stages (resource allocation and access) incorporate innovations that meet the criteria that have been agreed upon for this renewal of the EPHFs. The third stage introduces the institutional elements involved in the allocation of resources for the health sector that have implications for health systems strengthening and public health objectives. Stage four is the implementation of policies to assure access to the broad array of interventions that impact the health of the population. This marks an effort to integrate both individual and collective services, as well as those that are strictly part of the health sector and the intersectoral interventions that influence the health of the population.*

The last stage—access, i.e., produce the conditions to ensure access to health—includes the capacities to produce both individual and collective public health interventions that address risk factors, environmental public health, and the social determinants of health. This scope, expanded with respect to previous versions of the EPHFs in terms of the health interventions which are assured, focuses on the broader concept of access to health rather than on certain more selectively defined interventions.

The cyclical EPHF process should thus be interpreted as a self-driven feedback loop. The results of assessment provide inputs to help determine what is or is not working, which in turn should be considered in the process of policy development. The earlier stages are inputs for access to public health services.

It is important to clarify that although the process is described in different stages, the cycle is not linear. Indeed, many of the stages often overlap. Figure 1 should therefore be interpreted as a schematic simplification of the complexity of the process of formulating and implementing public health interventions. In practice, strengthening public health requires improving coordination among different national and subnational levels of government, and among several public and private actors and agencies inside and outside of the health sector. Public health encompasses various activities and structures within health systems that have become a collection of vertical programs, all quite distinct and separate in how they are planned, financed, and implemented.

The approach presented in this section seeks to support the planning of various activities to help improve public health through a systemic and collaborative approach, to achieve rigor and consistency when planning public health actions. This lends clarity regarding each actor's responsibility and the infrastructure required to support the action, leading to better decision-making on public health spending. This system also encourages inclusion of the action after an exhaustive analysis of the causes of public health problems and the search for comprehensive solutions. Commonalities among public health issues are recognized, which encourages collaborative work beyond artificial administrative boundaries and across the barriers between disciplines and vertical programs *(30, 87)*.

In this characterization of the exercise of the EPHFs, each function has equal relevance and cannot be isolated from the others. It also makes it possible to explicitly incorporate the role of the EPHFs in strengthening the institutional mechanisms and structures of the health system. This addresses the need to expand the scope of action of public health and seeks to boost the effectiveness of its outcomes by creating a real link between public health and health systems planning. It also acknowledges that there is overlap among public health services and functions that would benefit from an integrated and intersectoral approach to respond to the growing complexity of current and emerging public health problems.

Table 2. Stages of an integrated approach to the essential public health functions based on the policy cycle.

Assessment
To meet the objective of improving public health, the health authorities should first evaluate the health status of their communities, identify variations in health status, and analyze the factors contributing to poor health. This involves analysis of the causes of health needs and, therefore, of the risk factors and social determinants of health. The health authorities should also conduct assessments of individual, population-based, and community-based services. To this end, it is necessary to strengthen the intelligence capacity in the analysis of the health status of the population and its determinants, monitoring and evaluation of health systems performance and policies, and health research. Empirical data compiled during these processes offer evidence on the efficacy of health policies, and on the capacity of health systems to respond to the health needs of the population. This is all necessary background for the development of policies that involve community mobilization and educating the public about health issues.
Policy development
This stage refers to those conditions and capacities necessary for the development of health policies, social policies, and social development policies aimed at improving the health of the population by strengthening health systems, addressing risk factors, and addressing the determinants of health through intersectoral policies. It entails technical policy-making skills to address the causes of health problems in the population and explicitly indicate interventions aimed at strengthening health systems and addressing the factors contributing to poor health. It also entails strengthening the capacities of the health sector to work with other sectors, advocate for health policies, and place health on the agenda of other sectors so they will consider the impact of their policies on health. This also requires political skills to ensure that key actors (including civil society and the community) are involved in the decision-making processes and accountability, so that implementation of the health systems strengthening strategies and other changes will be viable.

Allocation of resources

The following are regarded as critical health system resources: financial resources, human resources, and health technologies.[a-d] Changes must be made to allow the generation and availability of sufficient public funds; and financial resources must be allocated to encourage prevention, promotion, efficiency, and equity in the health system, as well as social protection as it applies to health. As for human resources, the educational system must ensure that professional profiles are aligned with a people- and community-centered model of care, including public health competencies, and the proper distribution of professionals in the services, organizations, and territories so that they can respond to the health service needs of the entire population. With regard to health-related technologies, mechanisms should be fostered that promote technological innovation and are focused on responding to the health needs of the population, while promoting price transparency and strengthening the regulatory system to ensure the quality of medicines and improve the use of joint procurement mechanisms.[e]

Access

This stage refers to the implementation of policies to ensure access to the range of individual and population-based interventions that have a direct influence on the health status of the population. Access to these interventions is the result of policies and initiatives that seek to improve access to primary care health promotion and disease prevention services, multisectoral and community interventions that influence the health determinants, surveillance activities, and activities to prevent and control events and emergencies that can affect the health of the population.

This stage also includes an integrated approach to public health interventions and problems that helps promote access to comprehensive and integrated public health services through a people- and community-centered model of care. In this, health promotion and disease prevention services are managed from the perspective of family and community risks, life course, social determinants of health, and health in all policies. Implementation of these EPHFs entails coordination between the health services and other public and private actors, the development sector, and local governments in order to address the demands and priorities of the community.

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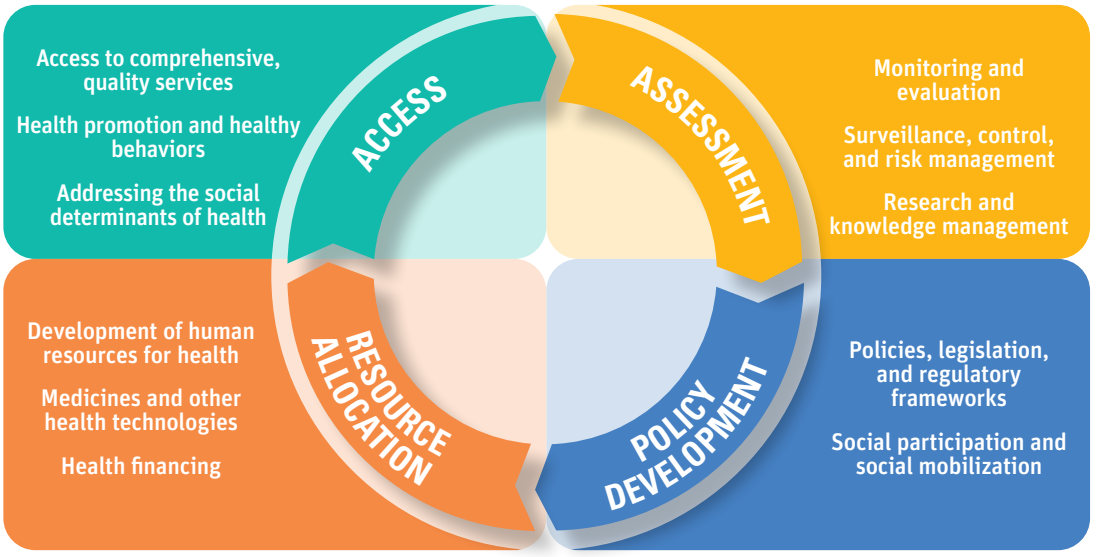
e Pan American Health Organization. Strategy for universal access to health and universal health coverage [Internet]. 53rd Directing Council of PAHO, 66th Session of the Regional Committee of WHO for the Americas; 2014 Sep 29-Oct 3; Washington, DC. Washington, DC: PAHO; 2014 (document CD53/5, Rev. 2).

PART IV

THE NEW ESSENTIAL PUBLIC HEALTH FUNCTIONS

This section presents 11 essential public health functions (EPHFs) that are considered appropriate for the Region of the Americas. These functions are defined around the four stages of the integrated approach discussed in the previous section, where each function has equal relevance and cannot be isolated from the others (Figure 2).

Figure 2. The essential public health functions within the integrated approach to public health



Source: *Own elaboration*

The resulting EPHFs, their scope, their current situations, and the associated practices are described in the following pages.

ASSESSMENT

EPHFs related to the assessment, research, and monitoring of the health status of communities and population, inequalities in health status, and the analysis of factors responsible for poor health, including the social determinants of health.

These EPHFs are necessary for strengthening capacities for intelligence, i.e., analysis of the population's health situation, monitoring and evaluation of health system performance, and health research. Empirical data compiled during these processes offer evidence on the efficacy of health policies, and on the capacity of health systems to respond to the health needs of the population. This provides the necessary input for the development of policies and entails community mobilization and educating the public about health issues.

EPHF 1: Monitoring and evaluation of health and well-being, equity, social determinants of health, and health system performance and impact

Description of the Function

EPHF 1 contains actions that ensure the availability, analysis, and use of information on the state of health and well-being of the population, equity in health, social determinants of health, health system response capacity, and population and individual public health interventions. This function aims to strengthen the capacities of health authorities to implement monitoring and evaluation processes, including the use of information technologies, data management, forecasting and scenario building, as well as the analysis and use of this information in health policy-making and sector-wide planning processes to respond to the health needs of the population *(88, 89)*.

Status of the Function

The institutionalization of monitoring and evaluation (M&E) systems in the Region, specifically in Latin America and the Caribbean, has accelerated in the 21st century with the creation of M&E units and mechanisms by several of the Region's governments, and with growing interest from civil society organizations that have promoted their use as a strategy to ensure transparency and accountability *(89)*.

Regarding government structures in the health sector, there has been a notable creation of entities in charge of coordinating the assessment and production of scientific information on the effectiveness, costs, and impact of health technologies. These assessments are a key tool for rational decision-making in many of the Region's countries. Furthermore, the entities in charge of care management have promoted the development of units whose primary function is to coordinate and implement supervision, monitoring, and evaluation of health facility management.

In many cases, these initiatives have contributed to the creation of health-sector information systems with significant progress, particularly in the integration of data and indicators on production, quality, costs, coverage, and performance of goods and services, as well as on population health status indicators. These systems are exhaustive in terms of the information they capture and make available, and most are linked to medium-term planning and objectives *(90)*.

On the other hand, there are challenges in terms of limitations on the ability of most countries to exercise monitoring and assessment of equity in the field of health and its determinants. These are mainly due to the ability of information systems to provide data that allow comparisons between population subgroups and the development of technical competencies to track, analyze, and communicate such information. For example, in many countries there are no household health surveys with data on the different dimensions of equity, such as economic status, urban or rural residence, and sex, among other aspects *(91)*.

In the case of national health strategies, many of the Region's countries have some type of M&E mechanism, which includes surveys and systems for outcome indicators, as well as evaluation of these policies, and entails the use of different instruments. Furthermore, several health projects with international financing include mid-term evaluations and monitoring, using indicators or targets. External, final, or impact evaluations are also performed *(90)*.

Despite this progress, gaps remain in the institutionalization of M&E as a strategy to improve the quality and management of policies in a way that favors the utilization of its findings and recommendations *(92)*. A growing number of the Region's governments currently acknowledge their M&E function, mainly through the promulgation of laws, decrees, or administrative amendments that establish its compulsory nature; however, planning and methodologies are less developed, since few countries have consistently developed rules and procedures that regulate specific forms of evaluation or systematic application of specific techniques, along with a planning process for the activity *(92)*.

The scope and use of results also pose considerable challenges, because there are no concrete mechanisms through which the findings become inputs for the public policy process *(90)*. Recent studies of the M&E structures and processes that have been developed show that almost all the Region's countries score very low when their M&E systems are evaluated for the existence of institutions that carry out monitoring activities, their scope and coordination with programs and projects, use and dissemination of information produced, quality of statistical information systems, and the legal and institutional framework *(93)*.

While countries in the Region have made substantial progress in improving information systems for health (IS4H), they still face major challenges in ensuring reliable, secure, and timely data in the necessary format *(94)*. Furthermore, efforts have mainly been limited

to the development of software and the adoption of isolated technology solutions, at the expense of capacity-building for the effective use of the information in decision-making. At the same time, several challenges persist with regard to the limited scope of current information systems, because of their exclusive focus on capturing public-sector data, lack of capability for data analysis, lack of ability to offer disaggregated data for analysis of equity, a bias toward quantitative data, and irregularities in population surveys. At present, there is a plethora of information systems linked to programs for specific diseases, without any coordination among them *(94)*. In many cases, these information systems do not address all the M&E needs of the health authorities, to a great extent because of the lack of interoperability and of institutionalized procedures for information sharing and management *(95)*. In the same vein, it is also essential to strengthen the capacity of health systems to use and integrate information gathered more informally and in a less systematic manner, such as that generated by social networks and other media related to e-health.

Mechanisms to Strengthen the Function

Implementation of this function requires the existence of legitimate and institutionalized entities with the obligation and responsibility to define and assume functions related to components of the M&E system for public health policies and programs. The existence of solid governance and mechanisms for coordination among actors, together with a comprehensive M&E plan, are a component that helps in this process *(96)*. Given the cross-sectoral nature of public health and the social determinants approach, it is also necessary to improve intersectoral coordination to successfully harmonize and promote an integrated, governmental M&E approach *(94)*.

Integrated information systems for health are needed to support the leadership and governance function of health authorities. The regional *Plan of Action for Strengthening Information Systems for Health 2019-2023*, approved by PAHO Member States in October 2019, presents key elements of action for ensuring innovation, integration, and convergence, including strengthening governance mechanisms of information systems for health, promoting the development of interconnected and interoperable information systems and the production and exchange of technical and scientific information to support the operation of information systems, establishing a network of institutions and experts to advise PAHO and the Member States on the introduction of innovative models for the development of information systems, and improving human resource training in all aspects of information systems for health.

The process for production and administration of information related to the health situation and equity requires a cross-sectoral approach and the interconnectivity and interoperability of participating information systems, to promote quality, transparency, safety, privacy, and confidentiality of the flow of information. Health authority leadership that prioritizes long-term capacity building over urgent needs, alongside an integrated approach to strengthen a unified information system instead of selective approaches that focus on specific data needs, is an element that helps develop information systems *(97)*.

There is also a need to strengthen the role of health authorities to monitor and ensure that the private sector complies with health information reporting requirements *(98)*. Leadership of the health authorities is also important in negotiations with international funding agencies, to ensure holistic development of information systems that prioritize national M&E needs over external needs *(99)*.

Regulatory and operational frameworks should strengthen institutions that produce and analyze information (e.g., statistics institutes, civil registry offices, health situation rooms), as well as develop interoperability standards and modernize M&E processes through new opportunities for innovation and data production.

This process should include all institutional levels of the system—national and subnational, interinstitutional, and intercountry—disaggregating the different population levels and focusing on the needs of people, communities, populations, and their greatest vulnerabilities *(100)*. In this regard, strengthening information systems so that M&E components include metrics on the social determinants of health, such as differences in income, education, employment, and unmet basic needs, serves as a basis for strengthening public management and social policies and programs that influence health and equity *(100)*.

In this context, initiatives are needed to improve the collection, quality, and use of data for monitoring and assessing equity in the field of health, as well as to develop the technical skills necessary for monitoring and analysis of this information. Data sources need to be strengthened through efforts to expand and conduct household surveys in a periodic, recurrent manner, ideally every few years in all countries, and harmonize institutional data by means such as the standardization of electronic records across all facilities *(91)*.

Similarly, it is important to ensure that evaluation designs include analysis of those political and social aspects that lead to inequities in health, such as economic inequalities, political influence, and shortcomings of social protection systems *(101)*. Within this framework, health monitoring and evaluation systems, and the analyses they give rise to, are instruments that serve for planning, implementation, and evaluation of health policies, a process that should be complemented with social dialogue so that health authorities can be held accountable to societal stakeholders.

EPHF 2: Public health surveillance; control and management of health risks and emergencies

Description of the Function

This function focuses on strengthening the institutional and steering capacities of health authorities to ensure adequate surveillance, control, management, and response to health risks, including outbreaks of communicable diseases, health emergencies, and risk factors for noncommunicable diseases, mental health, and injuries among other topics.

This function is made up of different types of practices whose common focus lies in systematically processing information for action. These practices include epidemiological surveillance of communicable diseases *(102)* and public health surveillance to support decision-making on prevention and control measures for health-related events (risks and harms) or to recommend health promotion actions *(102)*.

This function also encompasses positive health conditions, such as nutrition, growth and development, breastfeeding, and occupational health *(103, 104)*. It also includes monitoring of health determinants in a particular territory, under the responsibility of local government, strongly linked to individual and collective health promotion practices and from an intersectoral perspective *(105)*.

The function also includes monitoring of health risks and problems arising from production and consumption of goods (e.g., food) and the provision of health services (e.g., medicines and health technologies) *(106, 107)*, which usually falls to agencies affiliated with health authorities, an administrative position which grants them a measure of autonomy *(108)*.

Finally, this function also includes environmental surveillance in health, i.e., actions to detect environmental factors that interfere with human health, to propose prevention and control measures *(109, 110)*. One specific domain of this type of surveillance is surveillance and response in emergencies *(111-113)*.

Status of the Function

Many countries in the Region have made significant progress in the various components that make up the epidemiological surveillance system, mainly communicable diseases, including elements related to events, standards, and protocols and articulation of clinical, laboratory, and sentinel surveillance strategies, channels, and products (bulletins and reports). In other words, they generally comply with the guidelines that define the surveillance function: systematic and timely collection of information to support control interventions *(114-130)*.

Some countries in the Region have also made progress in surveillance system evaluation *(131, 132),* as well as in innovative experiences. Examples of this are the malaria control strategies being used in Andean region *(133)* and Suriname *(134)* border areas, hospital-based surveillance of Severe Acute Respiratory Infection (SARI) in Belo Horizonte *(135),* and control measures for major endemic diseases, such as dengue in Brazil *(136)*.

The Region has begun the development of surveillance networks of supranational scope. An example of this is the South American Health Surveillance and Response Network, promoted by the Union of South American Nations (UNASUR) South American Health Council in 2009 *(137)*. This network arose from the integration of two subregional proposals: that developed by the Andean Community in 1996, known as the Andean Epidemiological Surveillance Network, and the 1998 Mercosur proposal, known as the Mercosur Health Surveillance Commission. The Network made progress on the consensus-based prioritization of events

under surveillance, the development of a common computer tool for reporting (VIGISAS) *(138),* and the review and adaptation of the WHO instrument for monitoring the core capacities in the International Health Regulations (IHR) (2005) *(139)*.

The document *Influenza and Other Respiratory Virus Surveillance Systems in the Americas*, coordinated by PAHO, is another important experience in supranational surveillance. The information provided by each country enables timely surveillance of circulating respiratory viruses in the entire Western Hemisphere and demonstrates the feasibility of developing broad surveillance networks *(140)*.

These capabilities have been crucial in responding to public health emergencies such as the 2020 COVID-19 pandemic, but also in other experiences of the recent past, such as the H1N1 influenza pandemic in 2009, the Ebola virus outbreak in 2014, and the Zika virus and cholera (Haiti) outbreaks in 2016. However, these crises have also exposed the challenges still facing the international community and national health authorities in responding to these serious and rapidly evolving events. The resurgence of yellow fever was the latest event to require a coordinated response between countries and external actors in the Region *(141)*.

Several countries have also obtained experiences through agencies involved in the regulation of foods and health technologies: in Argentina, the National Administration of Medicines, Food and Medical Devices (ANMAT); in the Plurinational State of Bolivia, the Directorate for Medicines and Health Technologies (Dinamed); in Brazil, the National Health Surveillance Agency (Anvisa); in Chile, the National Medicines Agency (Anamed); in Colombia, the National Institute of Medicines and Food (Invima); in Ecuador, the National Agency for Health Regulation, Control, and Surveillance (Arcsa); in Paraguay, the National Directorate of Health Surveillance; in Peru, the Directorate for Health Control and Surveillance; in Suriname and Uruguay, directorates for Health Assessment; and in the Bolivarian Republic of Venezuela, the Autonomous Office of the Health Comptroller *(108)*.

Some of these agencies can provide examples of successful health surveillance experiences. Examples include the Anmat Observatory in Argentina *(142)*, Educanvisa in Brazil *(143),* and evaluation for the incorporation of technologies in Uruguay *(144)*. In this area, specifically in the area of pharmacovigilance, and with support from the Pan American Network for Drug Regulatory Harmonization, organized by PAHO, verifiably successful experiences were carried out in Brazil, Mexico, Peru, and Uruguay *(145)*.

Over the past decade, several countries in the Region have expanded the scope of action of public health surveillance to include other events and their risk factors. In this regard, several countries are using surveillance strategies for common noncommunicable chronic diseases and their risk factors. The strategy entails population-based household surveys to learn about the prevalence of events and risk factors, such as diabetes, hypertension, obesity, overweight, sedentary lifestyle, smoking habits, and food (National Risk Factor Surveys). Depending on the country, the survey is carried out every three to five years,

enabling monitoring of events and evaluation of prevention and promotion policies. Some of the Region's countries that have made advances in this area are Argentina, Brazil, Chile, Paraguay, and Uruguay *(146)*.

Various experiences serve local needs for monitoring events other than communicable diseases. Examples include the systems set up for surveillance of injuries and violence in the cities of Rio de Janeiro (Brazil), Cali and Bogotá (Colombia), and Quito (Ecuador) *(103)*; maternal mortality surveillance in Jamaica *(147);* and situation analysis in Argentina *(148)*.

The situation described above stands in contrast to the underdeveloped nature of surveillance in other fields—e.g., surveillance of incidents caused by natural, accidental, or deliberate release of chemical, biological, or radioactive material; environmental surveillance; and, in particular, surveillance of the growing problem of multiple antibiotic resistance (MAR). While the prevalence of resistance to antimicrobials is higher in bacterial pathogens, it is also reported in fungal, parasitic, and viral diseases, such as human immunodeficiency virus (HIV) infection *(149)*. Since MAR is not included in surveillance, prevention, or risk management programs, an estimated 10 million deaths per year will be attributable to this problem by 2050, at an estimated worldwide cost of US$100 billion and a projected reduction in gross domestic product (GDP) of 2% to 3.5% *(150, 151)*.

Some determinants of MAR include improper use of medicines and a lack of programs for rational medicine use, multi-resistant microorganisms in hospital environments, low-quality hospital infrastructure and microbiological diagnoses, and lack of control of health-care-associated infections (HAIs). As of 2015, in the Region of the Americas, only 9% of countries reported a national action plan on microbial resistance, 15% of countries had submitted a 5-year progress report, and 37% of countries had reported on their surveillance systems. With regard to inappropriate antibiotic use, these medicines are sold without prescription in 50% of the Region's countries, only 49% of countries reported having a national regulatory authority, 40% had quality standards, and only 40% had processes in place to enforce those standards *(151)*.

Regarding environmental risks, 2016 saw a significant increase in the number of people affected by disasters (hydrological, meteorological, or geophysical). Globally, this figure stood at 569.4 million people, and the Americas was again the region with the second highest number of reported disasters (24.3% of all disasters) *(152)*. The earthquake in Ecuador and Hurricane Matthew in Haiti were the natural events that caused the greatest mortality in the world that year. Damages came to US$3.79 billion in South America, US$4.6 billion in the Caribbean, and US$48 billion in North America *(152)*. In the South American region, despite some important experiences, such as the Disaster Risk Management Network, disaster surveillance is still an area that requires further strengthening *(153)*.

When it comes to monitoring social determinants, there are even fewer experiences. Nevertheless, interesting examples include Argentina's National Healthy Municipalities Program *(154),* which, focusing on local governments, is carrying out comprehensive

strategies for surveillance of social determinants, together with health promotion actions. Since 2009, local governments (municipalities and communes) have been following a process which culminates in achieving official "healthy" status. This involves meeting several goals, such as setting up a local management board, drafting intervention proposals that address social determinants, and monitoring and evaluating program impact. At present, 1,012 of Argentina's 2,200 municipalities and communes are taking part in the program *(155)*.

Mechanisms to Strengthen the Function

The main challenge faced by surveillance systems is their fragmentation of the activities of different agencies, with an event-based approach and ability to detect risks and events more expeditiously *(141, 156)*. Similarly, strengthened surveillance requires a constant and uninterrupted flow of data to stakeholders involved in management of the response to both national and international events. Finally, resources should be properly managed, so that data flow can be quickly transformed into evidence for informed decision-making by the health authorities when managing a response *(141, 156)*.

In this context, health authorities should strengthen surveillance systems, prioritizing policy-making that involves civil society, to reduce the incidence of infections, optimize antibiotic use, and promote sustainable investments that consider each country's context. Alongside disease outbreak surveillance, laboratory surveillance and epidemiological surveillance functions should also be strengthened to produce information that enables health authorities to make cost-effective decisions. Furthermore, regulatory and oversight frameworks should be created to tackle the problem of inappropriate human and animal antimicrobial use, along with a monitoring system that strengthens the role of antibiotic use committees *(75)*.

Supranational bodies call for strengthening of surveillance activities within the core capacities set out in the IHR *(156)*. Specifically, strengthened governance and stewardship and the institutionalization of surveillance and monitoring systems are fundamental pillars of capacities that will enable proper surveillance in public health. At the national level, gaps and deficiencies in IHR implementation can be addressed by developing a stronger legal foundation that establishes a formal regulatory framework and ensures coordinated and rapid response capacity in health systems *(75)*.

It is also critical that health authorities strengthen their capacities to prevent and reduce risks and respond to disasters. In this regard, they should consider certain priorities, such as understanding the magnitude and characteristics of disaster risk, strengthening institutional arrangements to manage these risks, and investing in building resilient systems. These capabilities are crucial for adapting health systems to the different public health challenges that need to be addressed in preparing for effective response, recovery, and reconstruction. The development of these capacities should also include compliance with international frameworks, with shared responsibility between health authorities and

relevant national and subnational actors, and corresponding international cooperation *(157, 158)*.

Within this context, it is indispensable to optimize risk assessment for the development of evidence-based strategies and interventions. This will facilitate strengthened early warning and hazard forecast systems, an appropriate organizational structure for risk management offices, and links between these offices and the health authorities *(159)*. Similarly, capacities should be built to determine the repercussions of climate change on health at the national and subnational levels, understanding that these repercussions will be directly associated with the social determinants of health.

Health sector capacity for surveillance and response to these risks will depend on the quality and coordination among Emergency Operations Centers, response teams, and emergency medical teams. In addition, it is important to define the lines of authority, responsibilities, and coordination with civil society, volunteers, community organizations, academia, and the private sector *(159)*.

Surveillance and disaster risk reduction require a high capacity for management of critical resources (human, financial, technological, and physical), especially those located in areas at high risk for disasters. Since 2005, multiple international frameworks and the PAHO *Plan of Action for Disaster Risk Reduction 2016-2021 (159)* have also prioritized the implementation of strategies and financial and technological investments to counteract the effects of climate change and improve health services networks with safe, smart hospitals. Implementation of these strategies not only has structural and functional implications, but also strengthens the entire process of preparedness, response, and system recovery in disaster and emergency situations.

Since the start of the new millennium, processes of globalization, interconnection, and interdependence between countries and regions have been gathering speed. In this context, it is of paramount importance to ensure the health of populations during extraordinary and unforeseen events that pose risks to health, including public health emergencies of national or international concern, incidents caused by the natural, accidental, or deliberate release of chemical or biological material or nuclear radiation, and emerging health risks. Likewise, the health effects of climate change and natural disasters require appropriate and rapid responses from health systems.

To strengthen this function, health authorities should explore the development of health monitoring proposals. Not only the possible harms and risks to health should be taken into account, but also the social determinants of health. This proposal involves actors beyond the health sector, such as local governments, other sectors, and the community, and is closely linked to health promotion *(160)*.

EPHF 3: Promotion and management of health research and knowledge

Description of the Function

This function involves the production of scientific knowledge and its integration into the health policy-making process of health authorities, to ensure contributions essential to strengthening health systems and public health.

Status of the Function

There has been a substantial evolution that has shifted the political framework, paradigms, and manners in which health research is conducted and leveraged. In 2009, PAHO agreed on a Health Research Policy, and the Americas thus became the first WHO region to have a specific instrument on this topic (*161)*; the World Health Assembly, in turn, adopted the WHO Health Research Strategy *(162)* in 2010, which is synergistic to PAHO's policy of the previous year. The development of these policies was followed by the development of research policies, legislation, and agendas in several countries of the Americas *(163)*. As of 2017, 16 countries reported having a policy on health research, and 18 countries in the Caribbean Community (CARICOM) had adopted a common policy *(164)*.

Nonetheless, there are still significant differences across countries in their ability to offer, use, and organize health research, as well as to monitor their research capacity and to keep their national policies and agendas updated as circumstances change (e.g., epidemiological conditions, scientific knowledge, or government priorities). The Americas, including the Caribbean region, produce 46% of the world's public health research, but the largest proportion (37%) of this research comes from the United States *(165)*, and is not always relevant to the national context of other countries in the Region *(166)*. The Caribbean territories have the lowest scientific output in the Region, despite growing research in other countries *(167)* and major efforts to drive the development of competitive research teams *(168)*. Regional investment in research is also low in comparison with other regions. On average, the countries of Latin America and the Caribbean invest 0.6% of their GDP in research and development, in comparison with 2-3% invested by other countries, such as the United States, Germany, and Japan *(169)*. Few countries report investment in health research in a systematic, standardized fashion *(170)*.

Over the past decade, research reporting standards have improved and clinical trial records have brought transparency to research. There has also been growing development of the synthesis of evidence and of methodologies that facilitate knowledge transfer, as well as an emphasis on increasing the value of research and keeping it from going to waste *(171)*. Countries have developed platforms aimed at increasing transparency and public participation in health research *(172)*, while emphasis has been placed on the need to give greater impetus to research on public health and health services and systems *(33, 173)*.

However, there is still a need to integrate these developments in a way that benefits citizens, to expand them to cover other forms of research and other research resources and products, and to do so consistently in all countries. Furthermore, there is little or no organization or management of research in some places, and the scientific community needs to develop and harness structures and processes to support research on policies, health systems, and public health *(163)*. Better planning of investments in research is needed in order for discoveries to translate into public health and health system gains *(173)*. The lack of dashboards to provide standardized, valid, and timely information on countries' resources, capabilities, and research products is particularly significant; in addition, many reports are produced using outdated methodologies and lead to outdated information when made available.

Mechanisms to Strengthen the Function

This function requires effective and efficient mechanisms for research stewardship and governance, which contribute to the formulation and financing of research lines aligned with the policies and priorities defined by health authorities. These should take into account the social determinants of health and the challenges of the sectoral and cross-sectoral regulatory framework, as well as their influence on the constraints and challenges of the responsiveness of health systems *(161, 174)* and the research inputs needed for countries to achieve the Sustainable Development Goals (SDGs) to which they have committed. Mexico's National Science and Technology Council (CONACYT) is an example of a model of sustainable financing of health research in the Region. Other countries, including Argentina, Chile, Colombia, and Uruguay, have implemented similar approaches to allocating research funds through annual calls for research proposals, as a strategy to increase coordination between funding and health research priorities *(175)*.

Similarly, development of research capacity to support health policy-making requires strengthening human resources in terms of their suitability, composition, and training. Furthermore, it is necessary to develop and/or redevelop governance of health research, with structures and institutional mechanisms that implement codes of practice on ethical aspects and that ensure transparency in processes and products obtained *(162, 176)*. In this way, coordination can be fostered between knowledge production and decision-making processes in the development and implementation of health policies.

Coordination between management of knowledge production and policy-making should go beyond merely instrumental utilization by the health authorities of results published in scholarly journals. The answers obtained via health research need to be intelligible to those who are going to use them. As a result, the integration of scientific evidence with aspects related to context and implementation in policy-making, as well as the whole continuum of the knowledge production process, requires collaborative mechanisms that

link science, academia, and policy-making. Knowledge transfer and application initiatives in the Americas have not undergone comprehensive review. However, several case studies indicate that health authorities have established formal structures (units) in charge of implementing knowledge transfer at the national level as effective strategies to link research with health policy-making *(171)*.

Despite the various challenges involved in building capacity for research, regional experiences show that it is possible to obtain positive results through the coordinated use of existing networks and limited funds *(177)*. These experiences have fostered international collaboration as a means for countries to strengthen knowledge production and help to bridge gaps in terms of challenges and installed capacity, especially in countries with less developed capacities *(178, 179)*.

These experiences also underscore the importance of North-South and South-South cooperation to increase the capacity for research to improve health in the Americas. The key components of their success include supporting committed leaders, providing training based on existing regional training initiatives, and creating good regional and international associations. The presence of competent research institutions in Latin America and the Caribbean will be crucial for sustainable and equitable research for health in the future.

In addition, research ethics systems must be strengthened and efforts made to ensure that ethics are integrated into decision-making processes that impact the population of the countries of the Region of the Americas. To achieve these objectives, training initiatives need to be developed to integrate an ethical approach into the Region's health, surveillance, emergency response, immunization, and policy-making research.

Finally, health authorities should ensure social engagement and disseminate new evidence and knowledge transparently and in formats that facilitate its comprehension and use *(162)*. Participation in open evaluations and political debates, as well as dissemination through communication media adapted to each specific audience, should be increased.

POLICY DEVELOPMENT

These EPHFs develop technical capacity for health policy-making addressing population health, emphasizing interventions to address the causes of poor health and strengthen health systems. They also include mechanisms to ensure that key actors can participate in decision-making and accountability processes that support the implementation of strategies for health system strengthening and other changes.

EPHF 4: Development and implementation of health policies and promotion of legislation that protects the health of the population

Description of the Function

This role comprises two integral components: development of the capacities of health authorities to formulate and implement sectoral policies that address the health problems of the population and are informed by the best available and relevant knowledge; and the strengthening of their influence on the production of a body of legislation that constitutes a formal, regulatory, institutional framework for the health sector. Both components should be guided by the values, premises, and objectives of moving towards universal access to health and universal health coverage by strengthening the institutional structure of the health sector in response to the health challenges and problems of the population.[2]

Developing and implementing health policies requires interpreting the problems responsible for the population's health conditions and health inequity; designing strategies with effective, efficient, and safe interventions on institutional, organizational, and social factors; and having the technical and political skills to ensure implementation of and compliance with these strategies. The formulation and implementation of health policies should also consider the social determinants of health both during the development process and during implementation, as well as in the importance of intersectoral work during the policy cycle, i.e., during formulation, planning, implementation, and evaluation.

The effectiveness in the implementation of this function is expressed by the content of the policies and regulations which influence the allocation of health system resources (including human, financial, and technological resources). Promotion of legislation requires consideration of the values, conceptions, and formal institutional structures that define the institutional competencies of the governmental agencies that make up the health system.

2 This function covers the general capacities necessary for development of health policy and compliance therewith. The effectiveness of implementation of this function is expressed by the formulation of policies and regulations with influence on the resources of the health system (including human, financial, and technological resources), as well as in the development of policies which influence the social determinants of health, risk factors, and health promotion. These specific policies are addressed in more detail in functions 6, 7, 8, and 10.

Status of the Function

In the Region's countries, progress and challenges vary regarding health-related policy-making and legislating.

Most of the Region's countries have planned health policies with specific objectives to expand coverage and access to health services *(78)*, leveraging knowledge and technologies to respond to local problems, and addressing specific behavioral, environmental, and social risk factors *(164)*. These policies have led to the prioritization of interventions on different types of health problems, frequently aligned with national priorities *(78)*.

Despite the progress made, one of the core challenges is the limited development of the technical and political capacities needed to build an integrated and consensual vision for strengthening and transforming health systems. Having a unified vision will ensure consistency in legislation and health policies, and integration of a right-to-health perspective within the framework of human rights *(78, 180)*.

Although countries have staff trained in policy development (mainly strategic planning and management, preparation of legal instruments, and prioritization of public health policies), these capacities and competencies are unequally distributed both among countries and within national and subnational spaces *(180)*.

There is also limited coordination between the legislative branch (mainly health committees) and health authorities in the adoption and implementation of executive standards, laws, regulatory decrees, and health-related regulations *(180)*, as well as weaknesses in updating health priorities, lack of knowledge of acquired obligations (e.g., those related to the WHO Framework Convention on Tobacco Control [FCTC]), and limitations on the consistency of articulation between different interventions and knowledge of the effects and implications associated with these interventions.

Relevant actors in civil society, the private sector (with due attention regarding conflicts of interest), knowledge managers, and the community do not always participate in policy-making processes. An important constraint is the limited effort to produce mapping activities of current and potential partners to determine the extent to which implementation of health policies is both supported and viable *(78, 181)*. Also, with regard to support for subnational entities (states, provinces, and municipalities), there are difficulties in recognizing the need to support them, and challenges in terms of management capacity.

In the last 15 years, some national constitutions have been amended to guarantee human rights in social protection systems, while others have provided for the right to "good living" (el buen vivir), cultural and ethnic diversity, access to traditional medicine, safe drinking water, sanitation, and an adequate diet, among others *(180)*.

Some national laws have been reformed to ensure universal access to health services for specific populations, such as people living with HIV infection, disability, or mental disorders; mothers and children; adolescents; and older persons, while other countries

have enacted laws to guarantee universal access to health insurance and other medical benefits, including the right to health goods such as vaccines and essential medicines *(180)*. National or subnational laws have also been introduced to regulate risk factors for noncommunicable diseases, including tobacco-related factors, which respond to the implementation of the WHO FCTC, a legally binding international treaty that has been ratified by 30 of 35 PAHO Member States.

Mechanisms to Strengthen the Function

Health sector policies, strategies, and plans should articulate all goals, objectives, and activities in a comprehensive and coherent manner, guided by the principles and strategic lines of action of the *Strategy for Universal Access to Health and Universal Health Coverage (33)*. All sectoral programs and services should be considered, to facilitate coordination and to prevent fragmentation due to parallel planning and implementation *(181)*. To this end, it is important that policy planning include all aspects that have an impact on the health sector, such as human resources, health technologies, financial arrangements, personal and collective health services, specific programs, social determinants, and all actors, public and private, as well as policies outside the health sector that have a direct impact on the health of the population *(181)*.

When planning health policies geared to producing changes in the health system, one must seek to define responsibilities and allocate resources for interventions, in addition to supporting collaboration and coordination between the health authority and the legislative branch and other sectors involved in or having an influence on health. Particularly relevant is collaboration with the legislative branch, which must encompass and integrate the various essential functions of public health within a legislative agenda that supports the social values of right to health, solidarity, and equity *(33)*.

Measures should be aimed at producing changes in both sectoral and intersectoral institutional arrangements that facilitate the elimination of access barriers to individual and population-based public health services, resulting in improvements in health system response capacity *(182)*. This includes designing policies for the delivery of and access to comprehensive health services (individual and population-based, clinical, and non-clinical).

Policies and resources aimed at health improvement also need to be refocused on addressing structural and intermediate determinants of health, as well as risk factors. This paradigm will favor interventions that have multiple, broad, and beneficial effects, creating settings that make the healthy choice the easiest option. This requires the development of new skills for intelligence, analysis, policy development, and change management that are consonant with a new approach to addressing the social and physical environment, fostering greater engagement with intersectoral partners *(183)*.

Inside government, other ministries having competency in social policies are indispensable to sustaining intersectoral initiatives that address social determinants by strengthening social protection systems. It is also important for these initiatives to consider government areas that, directly or indirectly, impact the social determinants of health (production, work, etc.). In certain contexts, it is necessary to consider actors in subnational jurisdictions (provincial or municipal) with a key role in adapting or implementing initiatives in local contexts, as well as nongovernmental actors (organized or unorganized civil society, and private for-profit or nonprofit organizations, with greater or lesser formality and visibility) that have a role in social control and advocacy, and that influence change processes and service production.

To achieve coherence, it is important that public health policies be based on and aligned with State policies and objectives. Their formulation should include elements that are part of the agenda of other sectors, with defined targets that guide the allocation of resources and planning of intersectoral actions, as well as those included in legally binding treaties, such as the FCTC. Furthermore, it is important for information and activities to be agreed on by a broad range of health sector actors (including supporting programs, services, and functions), and by actors in other sectors *(181)*.

It is important for the policy-making process to be carried out at all institutional levels, whether national or subnational. Due consideration should be given to the global health agenda and the participation in international treaties and in consensus-building on policies and regulations with implications for population health. National levels should also be able to support the design and implementation of policies at the subnational level, with the involvement of the greatest number of actors possible. National health authorities have the essential role of guiding and collaborating with the different institutions of the health sector and with subnational entities to ensure alignment with the guidelines established in national health strategies *(181)*. They should also seek to make decisions and policies informed by the best available knowledge and ensure that local contexts and values are considered in the implementation.

Effective policy-making for public health also requires strengthening of the analytical, operational, and political capacities of the health authorities. With regard to analytical capabilities, health authorities require a significant number of personnel with critical thinking skills and competencies in access to and implementation of technical and scientific knowledge for effective policy-making, strengthening of evidence-informed legislative frameworks, and mechanisms for monitoring, evaluating, refining, and implementing interventions.

Strengthening public policy management abilities requires improving the internal organization of public agencies and also improving their relationships with the legislative and executive branch, and with other actors. This requires strategic mapping of actors (their interests, ideologies, and the relationships among them) and the creation of

strategic partnerships and social dialogue mechanisms that facilitate the viability of the change processes being promoted *(78)*.

Finally, the health authorities should consider mechanisms for implementation and oversight of these policies. Once public policies have been formulated, the process of integrating health into them must be accompanied by an analysis of the impact of such formulation and a view to continuous improvement. In other words, the health authorities should strengthen enforcement mechanisms for these policies and regulatory frameworks and have mechanisms in place for course correction as necessary, based on reliable data and analysis.

EPHF 5: Social participation and social mobilization, inclusion of strategic actors, and transparency

Description of the Function

This function includes the action of social actors with the capacity, skills, and opportunity to identify problems and needs, set priorities, and formulate and negotiate their health development proposals in a deliberate, democratic, and concerted manner *(184)*. The function encompasses collective actions through which civil society and the organized community intervene and directly influence the organization, social control, management, and oversight of health institutions and the health system as a whole *(185)*.

Status of the Function

Civil society and community participation in the formulation and design of health policy was more strongly promoted following adoption of the Declaration of Alma-Ata in 1978 *(81)*, and later, the dissemination and implementation of the Ottawa Charter, adopted in 1986 *(186)*.[3] As a social practice during this period, it is identified that population groups participated in the development of community health posts or in gaining access to preventive health programs.

During the 1990s, many countries in the Americas promoted political and administrative transformations characterized by regional- and local-level decentralization aimed at democratizing health systems, bringing decision-making levels closer to citizens, and facilitating their participation in the system *(9, 187)*. In this context, there was an obvious need to strengthen social participation in planning processes, leading to the emergence of community participation committees as entities that enabled participation and gave voice to the community in planning and decentralization processes *(187, 188)*.

3 PAHO's publication *Health in the Americas+, 2017 Edition*, defines civil society as those groups outside the government created to promote public health and the general good, recognizing that civil society includes groups with very different interests, such as seemingly independent front groups created to surreptitiously defend third-party interest groups. See Pan American Health Organization. Health in the Americas+, 2017 edition. Summary: Regional outlook and country profiles [Internet]. Washington, DC: PAHO; 2017 [cited 2019 May 6]. Available from: http://iris.paho.org/xmlui/handle/123456789/34321 and Pan American Health Organization. The role of civil society and community in health policy-making. In: Health in the Americas+, 2017 Edition [Internet]. Washington, DC: PAHO; 2017 [cited 2018 Nov 12]. Available from: https://www.paho.org/salud-en-las-americas-2017/?p=71. We understand "community" as a specific group of people who usually live in a particular geographic area and have the same values, mores, and culture as well as a social structure that reflects the type of relations that the group has forged over time.

To date, many of the Region's countries have continued to develop mechanisms for social participation, notably the creation of user associations and committees for participation in local assessment processes. Social forums also are characteristic examples of this type of initiative *(78)*.

At the same time, the Region has seen the development of social movements and civil society organizations that advocate for the right to health, while promoting standards and regulations that address the conditions that jeopardize their health and quality of life, e.g., associations of people living with HIV, patients with chronic diseases, and LGBTI (lesbian, gay, bisexual, transgender, and intersex) individuals *(189)*.

Through different mechanisms and social initiatives, these groups have slowly assumed a more active role in promoting health system transformations that break with the status quo and promote policies with equity criteria and models based on the principle of living a decent life (*Sumak Kawsay*, among some indigenous peoples of Latin America) and the common good. Their participation is also observed at different levels: people with HIV, for example, participate in community advisory boards, national AIDS councils, the Board of Directors of the Global Fund to Fight AIDS, Tuberculosis and Malaria, the UNAIDS Programme Coordinating Board, and the PAHO Technical Advisory Committee, among others *(189)*.

Despite the different experiences with civil society and community participation, such participation often fails to meet the spirit of the declarations that initially promoted it. Many of the experiences of the last 30 years can be classified as ineffective or token participation, limited to ratifying decisions already made by the authorities *(189)*. In such cases, participation processes have been promoted mainly from the structures of power (the State or nongovernmental organizations implementing projects with public or donor funds) and do not correspond to the efforts of social organizations *(189)*.

Fragmentation and limited institutionalization of participation processes, community participation in response to circumstantial demands from institutional logic, lack of recognition of territorial dynamics, inadequate information, lack of funding, and the minimal scope of participation in decision-making are some of the main problems affecting social participation in health in the Region. Other factors, related to civil society itself, include poor organization and internal struggles for visibility and funds. In other cases, there may be contextual factors, such as lack of political will or interference from interest groups.

Mechanisms to Strengthen the Function

Civil society and the community need to be empowered to promote and demand health policies that establish a social, economic, and environmental context where the universal right to health is guaranteed, in addition to ensuring that they have transparent and equitable financing mechanisms, unaffected by conflicts of interest. At the same time, governments should guarantee opportunities for genuinely democratic policy-making

and decision-making and ensure effective participation by populations in conditions of vulnerability, so that policies respond to their needs. Greater transparency is essential, both in processes and in the information provided, so that the population can make informed decisions.

This participation should go beyond mere representation of civil society and the community and should accentuate the key role of society in social monitoring and in accountability mechanisms, regarding the performance of both the government and the private sector. It is essential to identify and train stakeholders who should be included in social participation, to strengthen social accountability mechanisms. This is essential in order to provide transparency and prevent noncompliance, failure to meet commitments, and actions that are disconnected from the public interest or not in the interest of public health *(190)*.

The scenarios and contexts in which participation takes place often create tension, resistance, disagreement, and confrontation with the power structure. It is therefore necessary for civil society and the community to increase their participation, and for health authorities to be more open to participation by facilitating and strengthening social entities and helping ensure their effective participation. To this end, it is important to strengthen the institutional agencies that advocate for civil society and develop effective channels for participation. The sustainability of this participation, primarily in light of financial constraints, is another aspect that should be addressed *(189)*.

The health authorities have a key role in generating collective action by key actors that facilitate the viability (political expertise) and feasibility (technical expertise) of changes in health systems, guided by the same ethical principles and values. The configuration of actors who should be called on is dynamic and depends on the nature of the problems addressed, the institutional structures and arrangements involved, and the political economy *(182)*. Careful analysis of possible conflicts of interest is particularly important when considering partnerships between civil society and the private sector.

ALLOCATION OF RESOURCES

The following EPHFs are related to implementation of policies aimed at strengthening formal or informal institutional arrangements and mechanisms that have an influence on coverage and allocation of critical health systems resources, including financial resources, human resources, and health technology *(191, 192)*.

EPHF 6: Development of human resources for health

Description of the Function

This EPHF includes the execution of policies, regulations, and interventions related to training, employment and working conditions, internal and external professional mobility, regulation of education and professional practice, and distribution of human resources for health. Although these actions are under the stewardship of the health authority, this function also requires strategic planning, with technical and political capacity to prepare and implement synergistic interventions in sectors other than health, each of which includes various actors with specific responsibilities, objectives, and interests *(193)*.

Status of the Function

The Region of the Americas has made great progress in developing policies and plans on human resources for health, improving their availability and distribution in health services, especially through multidisciplinary teams at the first level of care *(194)*. Several countries in the Region have the minimum staffing level recommended by WHO in 2006 (23 physicians, nurses, and midwives per 10,000 population) and are moving toward the levels established in 2015 (44.5 physicians, nurses, and midwives per 10,000 population) *(195)*.

Nevertheless, underestimation of needed investment in human resources and pending challenges in governance and regulatory mechanisms perpetuate inequities in health worker access, availability, distribution, and quality (between and within countries, between levels of care, and between public and private sectors) *(196)*. This is accentuated by low worker retention in rural and neglected areas, high rates of mobility and migration, precarious labor conditions, and low productivity and quality of performance *(197-199)*. Furthermore, the outsized emphasis on tertiary care and specialization competes with the process of educating professionals who have the public health competencies necessary for boosting primary care response capacity.

Poor management of intersectoral processes (e.g., fragmentation of legislative frameworks among sectors responsible for health, education, labor, finance, and professional practice) limits the intersectoral cooperation needed for appropriate training, professionalization, regulation of health workers' professional practice and working conditions, as well as the incorporation of interprofessional teams required for provision of comprehensive health services *(200, 201)*.

Mechanisms to Strengthen the Function

It is necessary to consolidate governance in human resources for health, regulation and oversight of training processes, regulation of the job market, and regulation of professional practice *(202)*. Strengthening the health authorities' steering function to lead intersectoral processes (including education, labor, and finances sectors) is essential for the development of human resources for health in accordance with the health needs of the population and in line with a health system based on primary health care *(202)*.

During their training process, it is fundamental to ensure that all health workers develop competencies that are appropriate for the performance of their duties and responsibilities in the context of a model of care based on people, families, and communities. To this end, regulation of health worker training needs to be strengthened, including the definition of needed standards and criteria in undergraduate, residency, and graduate-level education; continuing education; and technical and vocational education. Moving forward with definitions of competency profiles for different occupations and their specialties, as well as with accreditation and oversight of professional practice, following defined standards and instruments and performance evaluation bodies, is also essential *(202)*.

To fulfill these objectives, government stewardship is needed, along with ongoing coordination between national health and education authorities and academic institutions and communities, as well as high-level agreements between these sectors. These regulatory mechanisms encompass a continuum of interventions that begins with refocusing undergraduate education towards academia taking ownership of public health and towards a person- and community-centered model of care, the acquisition of skills for collaborative and interprofessional work, the production of different profiles of future professionals, and standardized national evaluations *(202)*.

Public health professionals need to acquire new skills for intersectoral work and public policy-making, including skills related to health situation analysis, surveillance and risk control, health promotion and social participation, development of health policies and legislation, the concept of global health, and addressing social determinants of health *(203)*. In addition to traditional competencies, such as medicine, epidemiology, laboratory science, community engagement, health education, and environmental public health, new competencies and abilities are needed, including policy analysis, communication, monitoring, evaluation, and quality improvement, and a deeper understanding of social determination and partnership with sectors other than health to address health determinants *(183)*.

Schools of public health need faculty with extensive professional experience in these disciplines, and to produce graduates with the ability to access, analyze, and apply technical and scientific knowledge for effective, evidence-informed health policy-making. As a specialty, epidemiology needs to incorporate new competencies, such as in surveillance, modeling of complex systems, and robust methods for evaluation of interventions with

multiple components, as well as open itself up to collaboration with different disciplines, such as law, education, and transportation, among others *(183)*.

Schools of public health need to ensure that students graduate with skills in oral presentation, writing, and persuasive communications, as well as a solid understanding of basic concepts of priority-setting, evidence, policy development, program implementation, evaluation, quality improvement, and planning. The curricula should provide graduates with skills to determine the magnitude and complexity of health problems, to identify possible interventions and select the most appropriate and acceptable ones using available evidence, and to develop practical plans to implement and evaluate their progress *(183)*.

These characteristics of professional education should be incorporated into the curriculum, from undergraduate education through residency programs, graduate school, and continuing education, in order to facilitate periodic recertification. Similarly, this process should be accompanied by institutional accreditation, which should cover the principles of primary health care, social commitment, interprofessional education, and the perspectives of public health and social determinants of health *(204)*.

The training process should be strengthened with guarantees of attractive, stable, and decent working conditions, with particular emphasis on cases in which services are to be provided in the first level of care and neglected areas, and population-based public health services *(202)*. This provision of services should be carried out within the framework of systems organized in networks, including analysis of all the levels of care and integration of public health services, for the purpose of boosting health worker response capacity.

Regulation of the job market requires planning of the supply and distribution of health-sector jobs, provision of decent working conditions and systems for protection against occupational hazards, and determination of compensation mechanisms which are adequate and aligned with the health needs of the population and with professional responsibilities (working hours, location of the workplace, etc.).

This should ensure appropriate geographical distribution according to the health needs of the population, incentives for professional training and development, and motivation to work. Similarly, it is important to advocate for the inclusion of new profiles and ways of organizing work (delegation and redistribution of tasks) and for the inclusion of gender perspectives and inclusivity in new hiring models, thereby maximizing deployment of the country's available resources.

It is necessary to strengthen the strategic planning done by management teams in the health authority and other entities, through joint training and experience-sharing, and to develop information systems on human resources for health aimed at supporting the formulation and monitoring of policies and strategies. These policies and strategies should include mechanisms to facilitate adequate provision and distribution of human resources for health in line with the specific needs of each community, including staff retention and rotation mechanisms that combine different types of incentives (economic and professional development, working conditions, and infrastructure).

It is important to prioritize the formation of interprofessional teams at the first level of care, setting specific standards and offering public employment. To this end, mechanisms are needed to evaluate and adapt capacities and profiles of first-level teams to ensure that all EPHFs are implemented, social determinants of health are addressed, and interculturalism is fostered.

EPHF 7: Ensuring access to and rational use of quality, safe, and effective essential medicines and other health technologies

Description of the Function

Equitable access to medicines and other health technologies is a global priority that was agreed upon in 2016 as part of the Sustainable Development Goals *(36)*.[4] At the regional level, PAHO's resolution on *Access and Rational Use of Strategic and High-cost Medicines and Other Health Technologies (205)* highlights the importance of access to and rational use of medicines and other health technologies, and proposes how countries can strengthen the role of ensuring access to these through different policy options.

Medicines and other essential health technologies are among the main therapeutic tools used by health professionals for the prevention, detection, and treatment of diseases, including rehabilitation and palliative care.

Ensuring access to medicines and other essential health technologies is a function with social impact that extends to the entire community. The positive externalities created by vaccination programs that prevent disease,[5] the social and ethical imperative that demands universal and equitable access to such medicines and health technologies as part of the right to health, and the population-wide scope of health regulation, which benefits everyone by ensuring that medical products marketed in countries are safe, high-quality, and effective, are but some examples of its scope as an essential function of public health.

Ensuring access to essential medicines and other health technologies requires the creation of specific capacities in universal health systems. This function addresses three key dimensions: *(1)* regulation and monitoring of the safety, quality, and efficacy of medicines and other health technologies; *(2)* the selection, evaluation, incorporation, and rational use of essential medicines and health technologies; and *(3)* the promotion, provision, and financing of medicines and other essential health technologies.

4 Specifically, target 3.8, "Achieve universal health coverage, including […] access to safe, effective, quality and affordable essential medicines and vaccines for all," and Goal 3b, "Support the research and development of vaccines and medicines for the communicable and noncommunicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines, in accordance with the Doha Declaration on the TRIPS Agreement and Public Health, which affirms the right of developing countries to use to the full the provisions in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health, and, in particular, provide access to medicines for all". See United Nations. Transforming our world: the 2030 Agenda for Sustainable Development [Internet]. Seventieth session of the United Nations General Assembly; 15 September 2015-12 September 2016; New York. New York: United Nations; 2015 [cited 2018 Nov 12] (Resolution A/RES/70/1). Available from: https://unctad.org/meetings/en/ SessionalDocuments/ares70d1_en.pdf.

5 The 73rd World Health Assembly recognized "the role of extensive immunization against COVID-19 as a global public good for health in preventing, containing and stopping transmission and detention of transmission". See World Health Organization. COVID-19 response [Internet]. 73rd World Health Assembly; 18-19 May 2020; Geneva (Switzerland). Geneva: WHO; 2020 [cited 2020 Jun 25]. Available from: https://apps.who.int/gb/ebwha/pdf_files/WHA73/A73_R1-en.pdf.

Status of the Function

Insufficient periodic measurement of access to medicines and other health technologies is one of several challenges that hinder up-to-date, accurate diagnosis of the situation in the Region of the Americas. Nevertheless, one may safely say that, the major efforts made by countries notwithstanding, significant asymmetries persist in access to medicines and other essential or strategic health technologies, and these asymmetries are replicated both between and within countries.

WHO noted that an estimated 2 billion people have no access to essential medicines and that middle- and low-income countries allocated 20.0% and 60.0% of their health expenditure to pharmaceuticals compared with 18% in high-income countries *(206, 207)*.

Despite the progress made, the Region of the Americas faces perennial challenges and requires continuous action to improve access to medicines and other health technologies. Examples include significant advances in expanding access to hepatitis C virus infection treatments. However, it is estimated that only about 25% of people with this infection in the Region of the Americas have been diagnosed (14% in Latin America and the Caribbean), and that, in 2016, only 16% of those diagnosed in the Region were receiving treatment, a percentage that decreased to 5% if considering Latin America and the Caribbean only *(208)*.

At the regional level, promoting the rational use of medicines and health technologies and strengthening innovation, evaluation, and research into new health technologies contribute to further reducing unmet needs for individuals and communities.

These and other issues have an impact on access to medicines and other essential health technologies, with budgets being overwhelmed by financial burdens caused by the increasing use of medicines and other high-cost health technologies, as well as by availability constraints due to supply-chain issues, from manufacturing through importing to patient dispensing.

The development of the generic medicines market is another key element of an access-focused drug policy, for which there are great opportunities in the Region. While generic penetration has recorded sustained growth, reaching up to 34% of the market in some Latin American countries, in other countries this segment barely accounts for 5% of the total market.[6]

Mechanisms to Strengthen the Function

WHO has noted "Improving access to health products is a multidimensional challenge that requires comprehensive national policies and strategies. These should align public health needs with economic and social development objectives and promote collaboration

6 Data presented during an in-person meeting of the Expert Committee for the Regulatory Landscape of the Americas, June 2019, PAHO Headquarters, Washington, D.C., USA.

with other sectors, partners and stakeholders; they also need to be aligned with legal and regulatory frameworks and cover the entire product life cycle, from research and development to quality assurance, supply chain management and use" *(209)*.

Strengthening an institutional, organic, and regulatory framework and developing access-focused policies for medicines and other health technologies lays the groundwork for essential capacities to ensure adequate coverage, access, and use of high-quality, safe, effective, and affordable medicines and other health technologies.

Mechanisms for strengthening this function should be tailored to the needs, national context, and type of health technology; e.g., strategies and policies for medicines and other high-cost technologies and limited resources, or policies and strategies for the development and production of medicines and other technologies for neglected diseases.

There are a variety of non-exclusive options that can be implemented to strengthen the function of ensuring access and coverage to medicines and other essential and strategic health technologies. Some of these include:

- Regulatory system strengthening. PAHO and WHO have recognized the importance of having robust regulatory systems to support health systems and the achievement of the SDGs related to health and universal health *(210, 211),* basing system strengthening on the establishment and implementation of regulations, laws, and policies, as well as on the provision of the necessary capacities to ensure that medicines and other health technologies are safe, effective, and meet quality specifications.
- Strengthening an integrated approach to the selection, evaluation, incorporation, and rational use of essential medicines and health technologies. To this end, it is essential to define the responsibilities and functions of the State agencies responsible for decision-making processes, from selection or evaluation and incorporation into formularies or coverage lists to rational and safe use, including the formulation of clinical practice, prescription, and dispensing guidelines, and, in all cases, with explicit, transparent, and evidence-based mechanisms for priority-setting. The regulation of incorporation processes should consider product coverage in health systems, ensuring that they are adapted to the health needs of the population, evaluation and prioritization technologies according to cost-effectiveness and equity criteria, as well as financial protection mechanisms that allow access to health services.
- Strengthening capacities to coordinate the functions of promotion, provision, and financing of medicines and other essential health technologies at the national level, seeking to sustain a progressive expansion toward equitable access and universal coverage of medicines and other essential health technologies, and avoiding out-of-pocket expenditures at the point of care.
- Implementation of strategies that promote rapid entry of multisource (generic) competing products into health systems, since this tends to reduce drug prices and expand access.
- Strengthening innovation and development of medicines and other health technologies through the implementation of transparency and intellectual property policies that take

into account a public health perspective, promoting the development of innovative medicines, avoiding the inappropriate extension of marketing exclusivity, and facilitating the timely entry of multisource (generic) products *(212)*.

- Strengthening of national technology transfer processes and industrial capacities, as appropriate, promoting the development and production of medicines and other essential health technologies and strategic technologies of regional interest.
- Strengthening mechanisms for the acquisition and allocation of medicines and health technologies. Options include improving price transparency for such products through institutional mechanisms that promote efficient, fair markets and equitable access. Alternatively, strengthening the purchasing capacity of public institutions, including centralized domestic procurement and regional joint procurement mechanisms, can promote fair pricing conditions and equitable access.

EPHF 8: Efficient and equitable health financing

Description of the Function

This function addresses each element of the health sector financing process, most tangibly, but not limited to, the health sector budget. Including this function ensures two important contributions: first, it includes the different functions of the health system financing model, with the aim of integrating all public health actions, both individual and collective, seeking to improve health system equity and efficiency (33, 182); second, it facilitates a comprehensive approach to the EPHFs, as a tool for financing the other EPHFs described herein *(33, 182)*.

This EPHF encompasses the institutional functions involved in raising funds from several sources and pooling, allocating, and strategically planning financial resources for health. This process depends on the types of financing, on whether payments are mandatory or voluntary, and on the origin of the resources or funds (general or specific taxes, voluntary or assessed contributions, direct payments from households or external sources). Pooling refers to the adoption of solidarity mechanisms for the collection and management of financial resources, as well as the distribution of risks and the search for equity and efficiency in expenditures among different population groups, so that the risk of having to pay for health interventions is borne by all members of the pooled fund. The allocation of funds refers to the mechanisms for transferring and distributing financial resources to health services and payers. Finally, financial planning refers to the process of setting priorities, analyzing the sustainability of investment in public health, auditing, and directing resources towards health objectives *(33)*.

To ensure an institutional design in which financing effectively facilitates the policy-making cycle, as discussed in the first chapter of this document, financial support for each EPHF needs to be addressed systematically.

Status of the Function

In the Region, the core aspects of this function generally follow the problems diagnosed in each country's health systems *(33)*. In this sense, funding is segmented into different subsystems, limiting solidarity and efficiency. Public funding is insufficient and, as a consequence, out-of-pocket spending by families is too high; financial protection fails to avoid barriers to access, impoverishment, and exposure to catastrophic expenditures for health events in relevant population groups. Public-sector fiscal space budgeting processes are complex, and often fail to represent the necessary priorities and express in practice the decision to achieve health objectives; ways of distributing resources often do not provide incentives for the efficiency of systems that promote equitable access to health.

Within this context, although in recent years there have been gradual increases in public investment in health in the Region of the Americas, the great majority of public spending on health goes to individual medical care and the treatment of disease, and a much smaller and inadequate proportion is spent, often ineffectively, on supporting national efforts to improve public health *(213)*.

In addition to being insufficient, public health investment itself is also fragmented *(213),* as the vast majority of resources are allocated to specific programs, without a broader perspective in which funding for all public health services is prioritized. In this regard, it is important to bear in mind the need to centralize resource allocation in some cases, in order to protect collective services. Many public health services exhibit characteristics of public goods, namely, the impossibility of excluding potential patrons and the absence of competition for consumption of the service *(214)*. Moreover, globalization processes tend to make some of the goods associated with health global. Tobacco control, for instance, has elements of a global public good in a world where trade, smuggling, and lifestyle dissemination make it difficult for national actions alone to succeed and, therefore, coordinated actions at the international level are needed *(215)*.

The impact of public health actions has been demonstrated by several successful interventions that have led to positive changes in risk factors and health outcomes. However, insufficient financing has often resulted in strategies that are not robust enough to protect the health of the population, leading to considerable human and economic losses.

Furthermore, there is evidence of historical instability in public health financing and an absence of a long-term commitment by lawmakers and decision-makers *(213)*. As a result, there is support for greater, sufficient, and stable financing, generated synergistically and collaboratively between national and subnational governments *(183)*. Unless it is properly funded to ensure all EPHFs, a health system's responsiveness to protect the health of the population will be substantially weakened.

Mechanisms to Strengthen the Function

Guaranteeing the availability of financial resources is important in order to increase and sustain access to health, reduce inequities, and implement effective public health interventions. Greater fiscal space for health (with greater revenue, prioritization of health, and greater efficiency), properly reflected in the budget in the form of financial planning for the achievement of health objectives, is thus a necessary condition for the health authorities *(213)*.

Funding can come from households, the government, and sometimes from external sources, whether through general or specific taxes, compulsory or voluntary contributions to social security, private insurance, and out-of-pocket payments *(216, 217)*. Although the preponderance of one or another of these institutional mechanisms will depend on the particular situation in each country, the *Strategy for Universal Access to Health and Universal Health Coverage* advocates for a benchmark goal higher than 6% of GDP, recognizing that public health expenditure is a more stable source of funding and thus makes it possible to address the health needs of the population with greater equity and efficiency *(33)*. This level allows sustainable expansion of access, reduction of health inequities, increasing financial protection, and implementation of efficient interventions, aimed primarily at the first level of care, to improve its problem-solving capacity and ability to articulate service networks.

Progress towards eliminating out-of-pocket payment (and, consequently, increasing financial protection) must be made through solidarity-based mechanisms that consider sources of public funding to replace out-of-pocket expenditures. Pooling of funds is therefore a strategy to remove financial barriers to access to public health services. The larger the pool (i.e., the portion of the population which participates) and the better the distribution of risk (among the healthy and the sick, the young and older adults, the poor and the wealthy), the more effective the strategy. This determines the integration and/or coordination of different sources of health systems financing, thus improving the pooling of financial resources, and in turn the equity and efficiency of the health system *(33, 182)*.

The allocation of public expenditure for health involves the operation of equitable and efficient allocation mechanisms, with an incentive structure for individual and institutional providers that promotes greater coordination of services. These should be organized into integrated networks that respond to a person- and community-centered model of care and that prioritize investment in the primary level of care and public health services, i.e., implement a PHC-based strategy *(62)*.

Furthermore, it is important for health authorities to design and implement funding strategies that encourage coordination among different stakeholders, with an integrated approach among health services and public health services. The activities and actions listed in each of the EPHFs should serve as guidelines for planning and setting priorities for the use of limited resources for public health. Changes in the way that funds are

distributed also require modifications in how health authorities are organized in order to improve stewardship, support key functions, and offer programmatic flexibility *(213)*.

There is plenty of evidence that public health does not receive enough financing, despite its ability to protect and improve population health. To make progress in improving population health, national health systems need to maximize the efficiency and effectiveness of public health expenditure and recognize the need for greater investment *(213)*.

Performance of the financing functions mentioned above (collection, pooling, allocation) by the health authorities should be supported by a strategic budget-planning process aimed at improving public health. This process must guarantee the quality, efficiency, and transparency of these aforementioned functions through institutional oversight and regulatory mechanisms. This will make it possible to analyze strategies for raising revenue, partnerships, and allocation of resources, with effective budgetary mechanisms and financial sustainability. Finally, this planning will ensure adequate allocation of resources, in accordance with sufficiency, sustainability, progress, and universal access to public health services.

ACCESS

The following three essential functions are operational in nature. They assess the capacities needed to complete individual and collective public health interventions at different levels of intervention *(218)*. Thus, EPHF 9 refers to access to comprehensive, high-quality health services, which correspond to individual public health interventions that are implemented through the health services delivery system. These include both primary prevention for specific protection and secondary (screening) and tertiary (rehabilitation) prevention programs and personal (individual) care, as well as multisectoral and community interventions that are routinely managed from health facilities. EPHF 10 includes health protection interventions, which mainly correspond to collective public health interventions that seek to reduce risk factors and create healthy environments (e.g., access to safe drinking water and safe roads, tobacco smoke-free environments, front-of-package nutrition labeling). Finally, EPHF 11 includes interventions focused on addressing the social determinants of health (e.g., reducing poverty and improving education) and health promotion, i.e., primordial prevention and primary prevention.

EPHF 9: Equitable access to comprehensive, quality health services

Description of the Function

This function includes actions to ensure access to comprehensive, high-quality, progressively expanded, integrated public health services which are consistent with population health needs, system capacity, and the national context, through the organization and management of person-centered health services, with a focus on family and community risk, the life course, social determinants of health, and health in all policies. A "quality" health service is one that meets the health needs of individuals, families, and communities based on best practices, ethics, and scientific evidence, contributing to equity and well-being and leaving no one behind, which entails particular attention to diversity and vulnerable people and populations. Quality of care in the provision of health services presupposes delivery of person-, family-, and community-centered care, with optimal levels of safety, effectiveness, timeliness, efficiency, and equitable access as essential attributes in its definition. The achievement of these attributes is determined by the availability of services and their proper organization and management *(219)*.

Person-, family-, and community-centered care is care that consciously regards individuals, caregivers, families, and communities as participants and beneficiaries of health systems that can effectively respond to health needs and inspire confidence, and which are organized not so much according to specific diseases, but rather to meet the holistic needs of the person, and respect social preferences. This type of care also requires that persons, families, and communities receive the information and support they need to make decisions and participate in their own care, and that providers be able to perform at their best within a conducive work environment. Person-centered care is broader than

patient-centered care, as it transcends clinical consultation to also encompass people's health in their own community and the crucial role of the population in shaping health policies and services *(220)*.

This function also encompasses the implementation of strategies to ensure equitable, universal, cost-effective, and sustainable access to drugs and health technologies *(221)*. Execution of this EPHF encompasses integration and coordination of health services with other public and private actors, development sectors, and local governments to advocate for and address people's demands and health priorities. Ensuring equitable access to comprehensive, quality health services responds to the values of the right to health, solidarity, and equity that underpin the main current regional and global references and mandates *(33, 218)*.

Status of the Function

The persistence of barriers to access to health services is a serious public health problem: in 2013 and 2014, more than 1.2 million deaths in the Region of the Americas could have been prevented if health systems had provided accessible, timely, quality services *(25)*. The responsibility of health authorities in this matter is the essence and basis of this function *(182)*. The comprehensive characterization of access to services for which this function advocates is explained by the persistence of a fragmented, disease-centered approach to service delivery and management, limited to curative care, with episodic links between people and health professionals. Likewise, while promotion and prevention programs have made significant progress, vertical programs are still prevalent, with a focus on coverage and no emphasis on access and quality. Other challenges of this role are the low problem-solving capacity of health services, especially at the primary level of care; difficulties in implementing and controlling quality standards; contexts that are not conducive to a quality-driven culture; inadequate availability, training, and continuing education for human resources; limited access to medicines and other health technologies; and insufficient and inadequate financing. Medicines and other health technologies often represent the highest proportion of the cost of treatment and care. In Latin America and the Caribbean, antiretroviral drugs, for example, account for 75% of the cost of care for patients with HIV/AIDS, rising to over 90% in some cases *(222)*.

Mechanisms to Strengthen the Function

It is necessary to ensure access to comprehensive health services through a highly resolutive first level of care with high problem-solving capacity, embedded within a health service network to respond to most of the individual and collective health needs of the population, as well as to provide interventions for health protection.

The integration and coordination with higher-complexity individual care services and services provided at the community level by other sectoral, intersectoral, government, and nongovernment actors will facilitate articulation and supplemental mechanisms as

a strategy to foster resilience and build upon achievements *(218)*. A model of care based on people, families, and communities seeks to include intersectoral actions, seeking to coordinate with actors, agencies, institutions, and social policies, within the territorial area of the population for which it is responsible.

Both interventions from health systems and an intersectoral approach are required, as well as: strengthening the primary level of care and articulating with the remaining levels; empowering and involving people, including health workers, in interventions to improve the quality of care; and targeting health outcomes and improving the experiences and trust of individuals, families, and communities in the health services, beyond a mere focus on process optimization.

The individual and community approach to health entails creating conditions to empower people regarding their own health and ensuring the joint, organized involvement of the population in health management, as well as the development of policies to influence the social determinants of health. The people-and-communities-focused model aims to establish deep ties with individuals and communities to strengthen their participation and empowerment *(182)*. Beyond curative care, this is based on health needs, consolidating continuous, comprehensive, proactive care, increasing participation, responsibility, and awareness of the self-care of populations.

The adoption of innovative strategies to improve access to quality health services based on the use of information and communication technology makes it possible to transform work procedures and improve participatory interaction, risk management, and use of scientific evidence *(223)*. This approach, applied to medical care, helps improve the quality of life of the population. Services such as telemedicine, electronic medical records, georeferencing, and use of mobile devices will produce a broader, comprehensive, and continuing impact. This will increase efficiency in the use of time and resources, ensuring more equitable access, and in some contexts, reducing the constraints caused by lack of infrastructure and human and financial resources. All these strategies will help ensure equitable access to services of high technical and perceived quality.

EPHF 10: Equitable access to interventions that seek to promote health, reduce risk factors, and promote healthy behaviors

Description of the Function

This function covers actions to ensure access to all public health interventions aimed at reducing exposure to risk factors and promoting healthy settings *(62)*. These include policies to prevent risk factors for noncommunicable diseases, such as tax policies (e.g., taxes on tobacco, alcohol, and sugary drinks), regulation of marketing and promotion of certain products (e.g., regulation or bans on the promotion of tobacco and alcohol), labeling regulations (for tobacco products and foods), promotion and protection of breastfeeding, or promotion of physical activity and smoke-free environments. Also included are policies

aimed at ensuring sanitation, safe transport, vector control, air pollution control, food safety and food security, chemical safety, adaptation to climate change and mitigation of its effects, environmental health, and the protection of workers' health. The population-wide provision of these services will help improve the health status of broader cohorts of the population. To this end, it is fundamental for health authorities to recover leadership in intersectoral partnerships, which have been set aside with the imposition of the biomedical model.

Status of the Function

At present, many public health population programs and services, such as those related to food safety, sanitation, and control of vaccine-preventable diseases, are susceptible to budget cuts and weakened governance structures *(224)*. In addition, policies and programs addressing the prevention and control of noncommunicable diseases and mental health are not prioritized on the public health agenda, even if these account for the greatest burden of disease. Instead, the biomedical model of health predominates, with its emphasis on the pathophysiology of disease and delivery of clinical services to individuals, which consume an ever-growing portion of economic resources *(183)*.

In addition, many government public health agencies are poorly organized and inadequately staffed to address this complexity, do not work in tandem, or have different objectives, and business and economic interests can often negatively impact health policies. The interests of the tobacco, alcohol, and sugar-sweetened beverages industries influence public policies and sometimes interfere with policies for the prevention of noncommunicable diseases, for instance.

Mechanisms to Strengthen the Function

For this function to operate, it depends on the first eight functions already described above, as well as on leadership and coordination capacity to work with other sectors. It also requires extending coordination between the health sector and other government sectors, academia, the private sector, and other sectors whose work has an impact on health. This requires strengthening intersectoral initiatives that explicitly identify the improvement of health outcomes as one of their main objectives. In these cases, the health authorities should assume leadership in the supervision and coordination of social and health services and ensure close collaboration with other sectors.

Furthermore, it is important to strengthen initiatives that are not explicitly aimed at improving health outcomes, but that seek to improve some of their determinants and risk factors. Some of these initiatives are infrastructure development (e.g., parks, safe streets, drinking water and sewerage) and the regulation of goods and services with effects on health (e.g., road safety, front-of-package labeling of food and alcohol, drug and tobacco use), which are regulated in other institutional sectors (e.g., transport, education, trade, agriculture, or the environment). This requires broadening the scope of action and influence of health authorities on the agenda of other government policies, creating

intersectoral partnerships and venues and setting common objectives to strengthen health policies *(225)*.

An example of the health authorities having greater influence in other institutional sectors is the emergence and development of schemes to regulate the production and consumption of mass goods (e.g., food industry; pesticide use; regulation of alcohol, drug, and tobacco use; the environment; or road safety) to impact risk factors and population health. Seeking to reduce the number of preventable deaths and the burden of disease over the life course, these strategies are designed as mechanisms for regulating activities and processes, some of them outside the reach of the health sector, with a particular concern at the macro (national) level and with significant influence on the health conditions of the population *(226)*.

The above-mentioned efforts should be supplemented by community interventions at the local level—implemented in schools, workplaces, markets, or residential areas, among others—to address priority health problems while considering the complexity of determinants, such as behavior or cultural beliefs, which operate in the places where people live and work *(227)*. Aspects such as access to safe drinking water and sanitation, adequate waste management, and the proper management of hazardous materials in health facilities should also be addressed. These local interventions also facilitate the inclusion of health promotion actions in social activities, with greater consideration of the local context *(228)*.

EPHF 11: Management and promotion of interventions on the social determinants of health

Description of the Function

This function encompasses intersectoral initiatives which focus on addressing structural socioeconomic factors that compromise health, even if many of these are not under the direct control of the health sector. While the health system itself is an important determinant, other determinants, such as the quality of education, the strength of the labor market, the safety of the work environment, and the quality of neighborhoods, must be addressed in an intersectoral manner *(54, 229-233)*. The principal role of the health authorities in the exercise of this function is as a partner in the development and implementation of initiatives *(234)*. In these cases, the goal is to promote governance of health in all policies.

Status of the Function

Socioeconomic status, educational level, the conditions responsible for increasing violence rates, discrimination, structural racism, and the characteristics of neighborhoods, among others, are critical determinants of health and health inequities. Improvements in the economic, physical, social, and services environment of a community can help

ensure opportunities for health and support healthy behaviors. However, the role of the health authorities, and of public health, in addressing these determinants is not well-defined *(183)*. Health agencies rarely have the mandate, authority, or organizational ability to change policies, systems, and environments that can promote healthy living. That responsibility rests with agencies for housing, transportation, education, air quality, parks, criminal justice, agriculture, energy, and employment, among others *(84)*.

Mechanisms to Strengthen the Function

The solutions to the aforementioned problems require collaboration between different sectors at local, state, regional, and national levels, including government agencies, the private sector, and community organizations. Cross-sector collaboration can also be realized through health impact analysis, promotion of improvements by identifying opportunities to share and reduce inefficiencies in the use of State resources, or by fostering intersectoral innovation.

The health authorities should extend the scope of their responsibilities to ensure that decision-makers in non-health sectors recognize the implications of their decisions on public health. Health authorities may suggest ways of adjusting policies and programs to have more positive health effects or recommend changes to reduce avoidable harms through health impact assessments and equity in health. They may also participate in the development of state policies or in the implementation of effective, relevant interventions on the social and cultural reality of those who need them, as well as intervening in community education and mobilization *(183)*.

Different types of influence can be identified. There are intersectoral mechanisms that originate from other sectors toward the health sector through direct actions on social, economic, and environmental conditions that affect health, but also initiatives driven from the health sector to directly and indirectly influence policies, programs, and interventions on non-health sectors that nevertheless have an impact on the health and quality of life of the population *(235)*. The latter option is contained in the Health in All Policies strategy, whereby health authorities take the lead in making these issues visible and boosting and strengthening political will or participate in the regulation of those factors that affect the health of the population.

Collaborative alliances for coordination, cooperation, and integration, as well as intersectoral regulation, are effective ways to address the social determinants of health *(190, 236, 237)*. Intersectoral coordination between health authorities and institutions from other sectors seeks a comprehensive, integrated approach to the social problems of the population *(33)*. In meso and macro terms, there are numerous and varying intersectoral experiences of coordination between health policies and other social policies at the national level and, above all, at all spheres of local government *(78, 236)*. These intersectoral initiatives include intersectoral governance structures that seek to coordinate different ministerial jurisdictions (finance, housing, social development,

culture, safety, and health) to improve the effectiveness of policies and interventions, as well as coordinate different administrative levels in the development and implementation of policies and interventions.

Experiences around promoting health governance in all policies show that the success of these initiatives depends on different elements. First, joint action by State agencies, with extensive participation of the health sector, is necessary for the development of social policies with a comprehensive, integrated approach to the social needs of the population, shared goals and objectives, and seeking the holistic promotion of human development with an approach to equity and sustainable development, without any interference from commercial interests. Strong and visionary collective leadership is fundamental, including from the health sector, with a commitment to an intersectoral approach at the highest level of government, supported by a legal framework and explicit prioritization of human development, health, equity, and sustainability as core responsibilities and objectives of government *(41, 84)*.

Decisive, effective community involvement and the participation of different key actors is also important for the legitimacy and sustainability of any intersectoral coordination initiative, since these actors offer information on health barriers and opportunities, including possible settings in which government agencies and policies may hinder or promote health *(84)*. Examples of such actors include members of the community, political experts, organized civil society, the private sector (taking into account potential and actual conflicts of interest), national and subnational agencies, and local and regional governments. It is important to emphasize the fundamental contribution of community actors to understanding the impact on health and equity of any intervention and possible solutions to improve its impact. Community actors also are key partners in mobilizing the community during the implementation of intersectoral interventions.

Cross-sectoral coordination within government structures and processes must be institutionalized, and coherence between the policies of each sector of government with potential influence on health (e.g., taxes) must be ensured so that health, equity, and sustainability are taken into account from the earliest stages of program development and policy planning and development. This represents a fundamental change in government functions, with implications for the development of capacities (infrastructure, personnel, budget, policies, and procedures) to provide organizational structures with permanent and adequate funding, ideally at the highest levels of decision-making, as well as resources and organizational capacity for collaboration.

Mechanisms for coordinating different social policies also require a territorial perspective, both in the formulation and implementation of the government's social policies, and in the organizational structures of different jurisdictions, prioritizing population groups in conditions of vulnerability, such as those who are socially excluded, unemployed, or in precarious/informal working conditions, ethnic minorities, the LGBTI population, displaced persons, refugees, and migrants *(238-240)*.

PART V

RECOMMENDATIONS FOR IMPLEMENTING THE ESSENTIAL PUBLIC HEALTH FUNCTIONS

The issues analyzed above reaffirm the need identified 15 years ago to address the public health services included in the EPHFs in a comprehensive way, considering not only population-based health promotion and prevention services, but also ensuring access to necessary health care services through a model of care centered on people, families, and communities and addressing the social determinants of health.

This approach does not imply diluting the emphasis and resources of population- and community-based services and actions that affect the health of the population. The most important achievements of these actions, such as food safety and quality, water and sanitation services, and communicable and vaccine-preventable disease control, have paradoxically been accompanied by diminished perceived value among voters and politicians, which makes them vulnerable to budget cuts and weakened governance structures *(225)*.

As market dynamics change and globalization deepens, effective public health actions become increasingly important. It is also necessary to revitalize public health within the agenda of strengthening PHC-based health systems that prioritize disease prevention and promotion of health and well-being. Within that framework, analyzing issues of equity in access to and continuity of public health services should be a critical part of the health systems strengthening agenda. This reinforces the need to structure public policy-making around an analysis of the health problems of the population and their determinants, as

well as challenges and gaps in the health system's capacity to meet the health needs of the population within the scope of action of the EPHFs.

In light of the above, this document concludes with a set of recommendations.

Integrating the EPHF approach into decision-making

Although the 2002 *Public Health in the Americas* initiative *(1)* resulted in some very important achievements, mainly in terms of mobilizing stakeholders to discuss this topic and making significant progress in measuring the EPHFs, there also was a tendency to identify "EPHFs" as synonymous with their measurement, without deeper insight into their role as facilitators for strengthening health authorities and transforming health systems *(11)*.

The greatest strengths identified in the 2002 EPHF initiative for the Americas have been its theoretical content and its operationalization *(11)*. As for the regional evaluation exercises, political visibility and implicit comparisons between countries may have undermined their rigor and the practical use of their results *(241)*. The EPHF evaluation exercises were more successful when they were more candid and the actors involved showed political leadership *(11)*. On the other hand, the EPHFs were restricted to health sector references and methodology; cooperation from other sectors was weak and there was limited inclusion of civil society organizations and private health services, which limited the use and scope of EPHFs in the Region *(11)*.

One of the main lessons learned from past EPHF assessments is the need for this approach to become an integral part of the public health policy development and implementation cycle *(30, 241)*. This means that any implementation of the EPHF approach should include a commitment to repeated cycles of shared evaluations followed by coherent action–that is, acceptance of the findings and their systemic inclusion in the broader public health policy cycle *(30, 241)*.

The experience in the Americas shows that isolated EPHF measurement exercises do not necessarily lead to changes that improve public health practice and policies. To bring about these changes, it is necessary to more systematically adopt strategies informed by the findings of EPHF evaluation exercises *(242, 243)*. The health authorities and others responsible for public health should first reach a consensus on an operational definition of their public health functions, conduct a solid evaluation of these functions, and then plan and carry out activities informed by this evidence *(244)*.

Unfortunately, previous regional efforts lacked an adequate conceptual framework to recognize the contextual nature and interconnectedness of each EPHF *(241)*. Consequently, these efforts focused on measuring aspects of public health that only indirectly and partially characterized the functions included in public health practice. Opportunities to understand, control, and improve public health practice and policies were therefore limited.

Without a comprehensive EPHF evaluation system, it is not possible to bring about the changes required to improve public health practice and policies *(243)*. However, the commitment of those responsible for public health and the leadership of the health authorities are essential ingredients for going beyond EPHF assessment and ensuring effective strengthening. This also requires greater attention to the organizational and institutional practices of the health authorities, including work force development, leadership, allocation of financial resources, and management and change processes in the health sector *(243)*.

Social demands for better health outcomes within a scenario of limited resources cannot be met with the current health system structure and capacity *(243)*. The experiences of some countries of the Region, mainly Canada and the United States *(244-254)*, show that EPHF evaluation exercises can make a significant contribution, provided that they are part of a systematic approach to decision-making and are incorporated into a continuous cycle of quality improvement, in which the collection, production, and interpretation of data on current response capacity are used to address health problems and their determinants *(244-254)*. The lessons learned from these experiences reveal that evaluations require a reconfiguration of the health authorities so that health workers' daily professional practice can be integrated with EPHF assessment *(255)*.

Public health policy development and implementation includes different kinds of interventions (new laws, regulations, guidelines, organizational practices, and funding priorities) that impact the health status and well-being of the population *(256, 257)*. Inclusion of these interventions in public health policy development and implementation should be aligned with institutional and organizational changes promoted within the framework of the universal health strategy *(33)*.

The universal health strategy provides guidance on strategic actions that should be promoted for the transformation of health systems based on such values as the population's right to health, solidarity, and equity. This conceptual proposal for the EPHFs provides an analytical framework to identify and include different kinds of interventions that not only affect the health system, but also the social determinants of health, both of which have repercussions for the health of the population.

Experience with the EPHFs demonstrates that isolated measurement exercises do not lead to systemic changes to improve public health *(66, 241)*. The lessons learned both regionally and globally show that certain key elements must be present:

- National and local partners and decision-makers must take shared ownership of the assessment process. Only then can they ensure that the assessment is adapted to specific institutional competencies and objectives, and that the process can be monitored beyond a single measurement exercise through repeated evaluations based on a common framework *(30, 241)*.

- The assessment process should be explicitly integrated into the broader policy development cycle from the start, with the support of high-level political authorities and the mobilization of resources from the entire health system to ensure the institutional changes are relevant to the health of the population *(30, 241)*. Within this context, the proposed EPHF conceptual model should be integrated into the policy development process for transformation of health systems toward universal health *(33)*.
- At the same time, the evaluation exercise should not just take a top-down approach. It should attain consensus among local actors on the performance indicators and their importance for their work. It is essential to be flexible and to adapt tools to local circumstances and needs, affording an opportunity for a broad range of social actors to put forth different initiatives.
- To gain the acceptance of local public health professionals, their input should be relied on when developing the evaluation plan and for the development of specific tools for EPHF evaluation that will be assessed and used to guide improvements in quality and capacity.
- Effective applications of the EPHF approach are those which have institutionalized governance structures to continuously improve the capacity and practice of public health. Successful experiences, mainly in the United States, include the creation of quality improvement units in which personnel establish a link between their daily tasks and EPHF measurements such that the various actors are made responsible for using the performance indicators and acting upon them *(258, 259)*.
- Finally, policymakers should be assisted by technical experts, when necessary, to institute improvements in different spheres and types of interventions, whether by national academic or non-academic agencies, or by international organizations *(30, 241)*.

Situational analysis: the local context as a process reference

Processes to strengthen health systems are neither linear nor uniform throughout the Region of the Americas. Recognizing that there are multiple ways to organize health systems and many details involved in strengthening processes, it is crucial to stress that countries should establish their action plan in accordance with their unique social, economic, political, legal, demographic, historical, and cultural contexts, and the corresponding challenges and priorities in the field of health.

For this reason, any analysis of the EPHFs should be adapted to the specific characteristics and challenges of health systems strengthening in each country. It should start with an analysis of the issues in each case and the political, institutional, and cultural history of each country; and it should strive to identify and strengthen the capacity of the health authorities to promote and support an agenda for strengthening a primary health care-based health system that guarantees universal access and coverage.

Considering the new contexts and challenges in the countries of the Region, health systems should be strengthened in a sustainable way as they move toward universal and equitable access, by galvanizing changes at the institutional level *(260)*, redefining context-based collective action, and constantly engaging in new intersectoral interventions.

The political economy and public health policies

As with any decision-making process in public health practice, health policy-making is complex and depends on a variety of institutional, scientific, economic, social, and political factors *(261)*. Health policies are often implemented (or not implemented) due to political pressures or the demands and interests of certain civil society actors.

Using the EPHFs as a tool to strengthen health systems is politically complex and this cannot be ignored. To sustain these processes, it is necessary to address issues stemming from potential conflicts of interests and different viewpoints among the stakeholders involved in public health *(262-264)*.

To this end, the steering role of health authorities in the process of strengthening the health system requires that partnerships be established with other social actors to facilitate the political viability and social acceptability of proposals for the improvement of public health, without losing sight of the proposed values for the EPHFs and the role of the health authorities. Collective leadership by the health authorities and social actors is a key political component in the development and implementation of health systems strengthening *(33, 191, 192)*.

Within this framework, a new approach to the EPHFs should include the political capacities that facilitate this process. Potential conflicts should be managed by establishing joint action to legitimize the needed changes *(260)*. As a result, political economy should be analyzed as part of an EPHF approach.

Final reflections on the conceptual framework

This proposed EPHF conceptual framework responds to the need to revise and improve how these functions have been used in the Region of the Americas in recent decades. This review considers both the pending challenges identified in the late 1980s, as well as the new challenges brought by expanding globalization in this century. At the same time, significant progress has been made in raising the profile of the EPHFs as a strategic tool for improving public health. Nevertheless, these efforts have tended to be limited to measurement exercises, without increased strengthening of the health authorities and health systems, something that must be done to address the factors that impact the health of the population *(11)*.

The drafting of this EPHF proposal required review and consensus regarding the definition of the concept among multiple stakeholders committed to public health. This exercise permitted a revision of the scope of action of the EPHFs, considering as central criteria the role of the health authorities and civil society, the role of the intersectoral approach, and access to public health services.

These fundamental principles were used to reassess the conceptual framework for integrating the EPHFs into the health policy cycle. The definition of the policy cycle used

by the United States Institute of Medicine was taken as a reference point *(6)*, with four identified stages: assessment, i.e., the capacity of the health authorities to use intelligence on health problems; policy development, which seeks to intervene on the factors that affect health; allocation of the resources needed for implementation of these policies; and assurance of access to the activities that must be undertaken as necessary conditions. These stages should not be interpreted as linear or sequential, but as the performance of functions that are coordinated with policy-making by the health authorities and the joint action of various actors committed to the health of the population. These processes should be interpreted in light of the institutional, political, and social context of each country and included in processes of sectoral and intersectoral transformation promoted by States to improve the health of the population.

GLOSSARY

Access to health: the capacity to use comprehensive, adequate, timely, and quality health services at the time they are needed *(33)*.

Civil society: a vast and complex space in which ideological, political, and cultural confrontations take place and in which the hegemony of one power block over all of society can be found *(265)*.

Comprehensive health services: population-based and/or individual services that are culturally, ethnically, and linguistically appropriate, have a gender approach, and take into account differentiated needs in order to promote health, prevent disease, treat disease, and offer the short-, medium-, and long-term care needed *(33)*.

Equity: the absence of unjust, avoidable, or remediable differences among population groups in terms of health status and access to health and to healthy environments. This guides the prioritization of policy efforts and health interventions to meet the health needs of those in conditions of social and economic vulnerability *(266)*.

Essential public health functions (EPHFs): the capacities of the health authorities, at all institutional levels, to act with civil society to strengthen health systems and ensure the full exercise of public health, by acting on the social factors and determinants that impact the health of the population.

First level of care: the delivery of integrated and accessible services by health workers within family and community settings, with the intent of meeting most of people's health needs and developing an ongoing relationship with people *(267)*.

Governance: the institutional arrangements that regulate the actors and critical resources that influence conditions of coverage and access to health *(260)*.

Health: WHO defines health as "a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity."

Health actions: efforts in individual medical care, population services, and intersectoral initiatives whose principal purpose is to improve health *(266)*.

Health authorities: a set of State organizations, entities, or actors responsible for safeguarding the public good with regard to health *(79)*. Health authorities may be structurally different depending on whether the country is federal or unitary and how health sector institutions are organized.

Health care: care tailored to the health needs of the entire population; effective care, based on the best available scientific evidence; safe and harm-free interventions; and priorities for allocation and organization of resources set according to criteria of equity and economic efficiency (i.e., cost-effectiveness) *(267)*.

Health care services: coordinated health information and intervention systems for people with diseases, where the value of self-care in the treatment and control of such

diseases is shared. These services focus on the care of patients with specific diagnoses and are centered on the treatment of diseases that require preventive approaches, curative treatment, or rehabilitation. Health care services are divided into levels of care (first, second, and third level of care) *(267)*.

Health coverage: the capacity of the health system to serve the needs of the population, which includes the availability of infrastructure, human resources, health technologies (including drugs), and financing.

Health in All Policies: an approach to public policies across sectors that systematically considers the health implications of decisions, seeks synergies, and prevents harmful health impacts, to improve population health and health equity *(190)*.

Health information system: a set of activities and procedures that collects, processes, analyzes, disseminates, catalogs, and stores data from primary and secondary sources and transforms those data into useful information to support decision-making in the health sector *(268)*.

Health promotion: a process that gives people greater control over their health and the ability to improve it *(269)*.

Health sector: the health sector consists of organized public and private health services (including health promotion, disease prevention, diagnostic, treatment, and care services), and the policies and activities of health departments and ministries, health-related nongovernment organizations and community groups, and professional associations *(269)*.

Health service quality: the degree to which health care services increase the likelihood of desired health outcomes and are consistent with current professional knowledge. This also includes the subjective component of service quality as perceived by users *(226)*.

Health situation analysis: a method for the systematic review of a population's health problems, leading to consensus on priorities and policy-making to improve health and reduce inequities *(270)*.

Health system: a set of organizations, individuals, and actions whose fundamental purpose is to promote, restore, and/or improve health *(73)*.

Health system responsiveness: the capacity of the health system to carry out its functions, including service delivery, management of the infrastructure and human resources necessary for the delivery of these services, the collection and pooling of financial resources, and a stewardship role in establishing and enforcing rules and providing strategic direction to all stakeholders. These functions seek to respond to the needs, priorities, and health of the population.

Human resources for health: all people engaged in actions whose primary intent is to protect and enhance health, and cure and prevent disease *(195)*.

Integrated health services delivery network (IHSN): a network of organizations that provides, or makes arrangements to provide, equitable, comprehensive, and integrated health services to a defined population, and is accountable for its clinical and economic outcomes and for the health status of the population it serves *(267)*.

Integration: integration of primary care and public health generally is understood to be the linking of programs and activities to promote general efficiency and effectiveness and achieve gains in the health of the population *(86)*.

International Health Regulations (IHR): regulations adopted by the World Health Organization and its Member States to prevent and protect against the international spread of disease, control it, and give a measured public health response restricted to public health hazards, while preventing unnecessary interference with international traffic and trade *(156)*.

Intersectoral action: coordinated intervention by more than one institutional sector in actions aimed at improving population health and well-being. This includes both purely horizontal action between ministries and agencies, and actions across different levels of government *(271)*.

Model of care: the model of care establishes and describes the optimal way for health authorities to organize their actions to meet the requirements and demands of the population, focusing on linking people and communities to health services *(272)*.

National health policy: a formal statement or procedure within an institution governing the health system (usually, the government) which defines goals, priorities, and parameters for action in response to health needs, within the context of available resources *(273)*.

National plan of action: a master plan for attaining national health goals through implementation of a sectoral and intersectoral strategy. Such a framework leads to more detailed programming, budgeting, implementation, and evaluation *(273)*.

Out-of-pocket payments: usually charges or fees for medical consultations, medical or investigative procedures, medicines and other supplies, and laboratory tests. Depending on the country, they are charged by the government, nongovernmental organizations, and faith-based and private health facilities. Even where these charges are covered by insurance, patients are generally required to share the costs, typically in the form of co-insurance, co-payments, and/or deductibles—payments insured persons have to make directly out of pocket at the time they use services because these costs are not covered by the insurance plan *(274)*.

Patient safety: reduction of risk of unnecessary harm associated with health care to an acceptable minimum *(275)*.

Pooling resources: combining all sources of financing (social security, government budget, individual contributions, and other funds) in a single, pooled fund; i.e., all contribute according to their means and receive service according to their needs. In such a scheme, the public budget covers contributions for those individuals who do not have the means to contribute (poor and homeless people) *(33)*.

Public health: the practice and field of knowledge related to joint action by the State together with civil society to protect and improve the health of the people and assure the right to health of the population.

Public health emergency of international concern: an extraordinary event that i) constitutes a public health risk to other States through the international spread of disease, and ii) potentially requires a coordinated international response *(141)*.

Public health risk: likelihood of an event that may adversely affect the health of human populations, with an emphasis on risks that may spread internationally or may present a serious and direct danger *(156)*.

Public health surveillance: surveillance means the systematic and ongoing collection, collation, and analysis of data for public health purposes, and the timely dissemination of public health information for assessment and public health response *(156)*.

Quality of life: WHO defines quality of life as an individual's perception of their position in life, in the context of the culture and values system in which they live and in relation to their goals, expectations, habits, and concerns. It is a wide-ranging concept affected in a complex way by the person's physical health, psychological state, personal beliefs, social relationships, and relationship with their surroundings.

Right to health: right of every person to enjoy the highest attainable standard of health, with equity and solidarity *(33)*.

Social determinants of health: the circumstances in which people are born, grow up, live, work, and age, including the health system. These circumstances are the result of the distribution of wealth, power, and global, national, and local resources that in turn rely on the policies adopted *(276)*. The social determinants explain social inequalities in health, and, from an operational/analytical perspective, they can be divided into inequalities in health status and inequalities in health care *(223)*.

Social participation in health: a process through which people and communities gain greater control over decisions and actions affecting the health of the population *(269)*.

Solidarity: the principle underpinning the social protection system, with redistributive mechanisms through contributions based on people's and companies' ability to pay, established to meet the needs of the population *(266)*.

Stewardship: the leadership capacity of the health authorities to institute and support joint action in order to create, strengthen, or change the governance structures of the health system *(260)*.

Strategic actors: individuals, groups, or organizations that are interested in and that influence the institutional configuration of the health system and health service delivery *(236)*.

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This publication presents a renewed conceptual framework for the essential public health functions (EPHFs) in the Region of the Americas. It aims to provide greater conceptual clarity and operability to the new scope of action of public health and bridge a gap in conceptual proposals on health system strengthening.

The proposed framework introduces a new paradigm for public health based on four action-oriented pillars, namely the need to incorporate a human rights approach into public health policies, the need for public health to broaden its approach to the social determinants of health, the role of public health in ensuring comprehensive and integrated access to population-wide interventions and high-quality individual care, and the need for health authorities to act in cooperation with other sectors and civil society to perform public health functions. Eleven EPHFs appropriate for the Americas are also proposed and described, contextualized as a set of capabilities that are part of an integrated four-stage policy cycle (assessment, policy development, resource allocation, and access). This model guides the development of integrated public health policies through intersectoral collaboration at all four stages of the cycle.

The proposal culminates in a series of recommendations for implementation of the integrated EPHF approach. These recommendations highlight the need to link the EPHFs to national assessment exercises and continuing capacity-building.

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