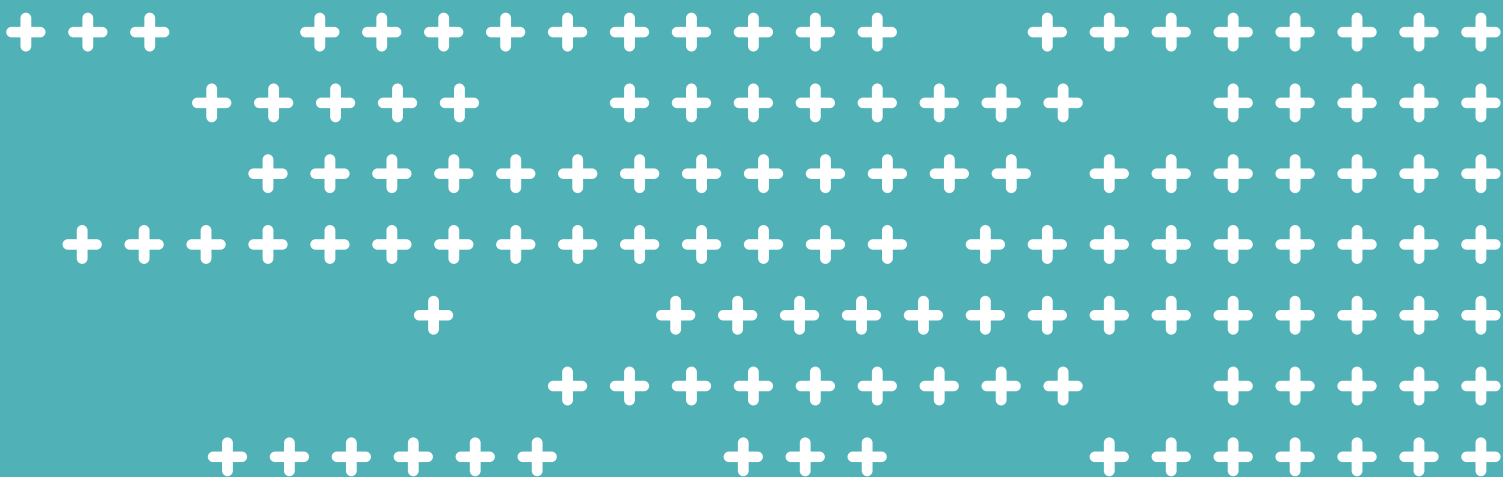


Defining essential public health functions and services to strengthen national workforce capacity



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+ Preface

The purpose of this document is to support countries in contextualizing and implementing action area 1 of the roadmap and action plan to strengthen the public health workforce, which includes the emergency workforce. Action area 1 focuses on operationalizing the essential public health functions (EPHFs). Countries can use this document to identify their priorities relating to the EPHFs, subfunctions and public health services in the post-COVID-19 era and to understand and strengthen public health capacities and stewardship. A strategic review of the EPHFs can inform broader public health strengthening or reform. This document also includes an annex summarizing the findings of a survey on mapping EPHF-related health workforce strengthening activities within the World Health Organization (WHO) and by key partners, which informed the work.

This document summarizes the technical details and approaches presented in the publication *Application of the essential public health functions: an integrated and comprehensive approach to public health*, which was co-developed by WHO's Health System Resilience and Essential Public Health Functions Team, Special Programme on Primary Health Care, and the International Association of National Public Health Institutes.

This document belongs to the National Workforce Capacity for Essential Public Health Functions Collection, which includes an operational handbook and guidance on functions, competency-based education and workforce enumeration.

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1. Introduction

Health system challenges are increasing in number and complexity, such as emerging and re-emerging infectious disease threats, rising rates of antimicrobial resistance, ageing populations, rising multimorbidity and the growing impacts of climate change. Experience of public health emergencies such as the COVID-19 pandemic clearly demonstrates that weak public health capacities leave populations and health, economic and social systems vulnerable, with disproportionate impacts on society's most disadvantaged groups. Health sector resourcing for public health is often seen as a cost rather than an investment, and the limited resources available are often skewed towards clinical services and emergency response, leaving persistent weaknesses in disease prevention, health promotion and health protection. The increasing complexity of public health challenges and the needs for cost saving and a more equitable approach to health have led to a renewed interest in and focus on the essential public health functions (EPHFs).

The importance of the EPHFs has been recognized to promote “health for all” in line with World Health Organization (WHO) studies in 1998 (1,2). Since then, their strategic importance has been confirmed by a number of resolutions and high-level documents globally and in WHO regions (3–23). In 2016, World Health Assembly resolution WHA69.1 mandated WHO to support Member States in strengthening the EPHFs while recognizing their critical role in achieving universal health coverage (24). This was reaffirmed in the Declaration of Astana of 2018, which recognized the EPHFs as a core component of primary health care (25), and by global partners, including the International Association of National Public Health Institutes (26,27) and the United Nations (28). At the national level, the EPHFs and equivalent concepts have been applied in around 100 countries, for example, to support the design of the public health system, to assess national capacity for public health and to inform health worker education curricula (29,30).

Despite this, COVID-19 revealed fragmentation and inadequacies in health systems and public health services, undermining health system resilience and progress towards universal health coverage, health security and healthier populations, leaving populations vulnerable, even in high- and middle-income countries. The learning from experience of public health challenges also demonstrates the clear interdependencies between different aspects of public health, such as health promotion and emergency preparedness and response. This provides impetus and need for guidance on strengthening public health stewardship and capacities, informed by the EPHFs, as a comprehensive approach to public health.

Within this context, WHO and partners have developed a roadmap and action plan for aligning contributions towards building national workforce capacity to implement the EPHFs, including a focus on emergency preparedness and response (31,32). The roadmap consists of three action areas: defining the public health functions and services, competency-based education, and mapping and measurement of occupations. The primary aim of this document is to provide a technical overview of the EPHFs, their subfunctions and the associated public health services, in support of the roadmap's action areas. More technical details can be found in *Application of the essential public health functions: an integrated and comprehensive approach to public health* (33).

2. Overview of the EPHFs

In light of lessons learned from the COVID-19 pandemic and other pressing public health challenges, WHO proposed a unified list of EPHFs after a review of existing lists of EPHFs and related concepts (for example, WHO regional lists and lists used by partners such as the United States Centers for Disease Control and Prevention, European Commission, World Bank and various countries). This review demonstrated that, while there are differences in how public health is conceptualized and articulated, there is clear global consensus on what constitutes fundamental public health activities (33).

WHO's unified list of EPHFs consists of 12 high-level activities (see Box 1), which can be used to comprehensively operationalize public health in a country to prevent disease, to promote and protect health and well-being, and to address the broad determinants of health (29,34). This list can be contextualized and reorganized according to a country's health needs and public health capacities. An example is shown in Fig. 1, which maps domains of public health medicine in Ireland against WHO's unified list (35). This mapping is the foundational step and sets the baseline for applying the EPHFs in a country context.

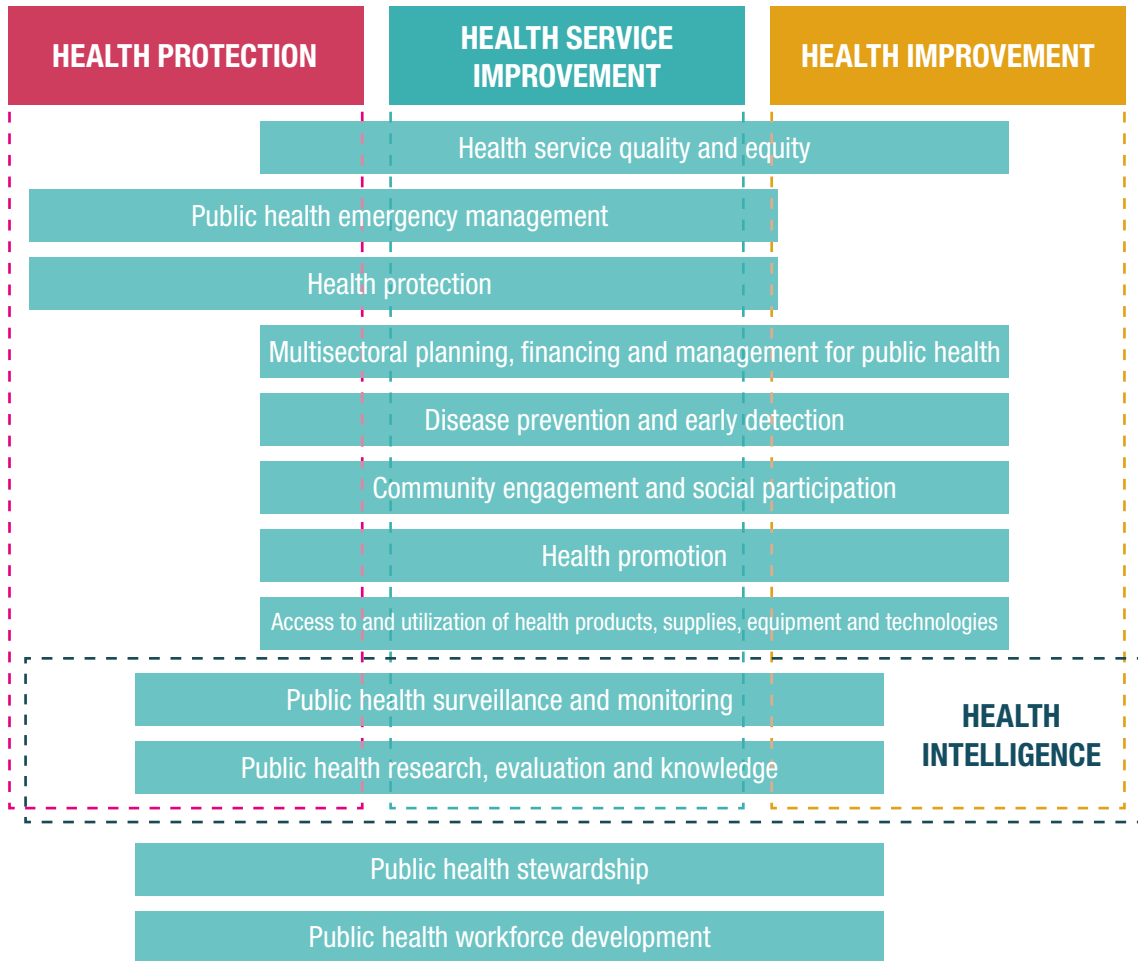
Applying the EPHFs serves to orient health systems to population health needs and to stressors, and to orient governments and societies towards health and well-being by applying a whole-of-society approach to health. This maximizes health gains within available resources, and builds resilience and equity, while reducing population vulnerability and the overall burden on the health system.

Box 1. A unified list of 12 EPHFs

- **Public health surveillance and monitoring:** monitoring and surveillance of population health status, risks, protective and promotive factors, threats to health, and health system performance and service utilization.
- **Public health emergency management:** managing public health emergencies for international and national health security.
- **Public health stewardship:** establishing effective public health institutional structures, leadership, coordination, accountability, regulations and laws.
- **Multisectoral planning, financing and management for public health:** supporting effective and efficient health systems and multisectoral planning, financing and management for public health.
- **Health protection:** protecting populations against health threats, for example, environmental and occupational hazards, communicable and noncommunicable diseases, including mental health conditions, food insecurity, and chemical and radiation hazards.
- **Disease prevention and early detection:** prevention and early detection of communicable and non-communicable diseases, including mental health conditions, and prevention of injuries.
- **Health promotion:** promoting health and well-being as well as actions to address the wider determinants of health and inequity.
- **Community engagement and social participation:** strengthening community engagement, participation and social mobilization for health and well-being.
- **Public health workforce development:** developing and maintaining an adequate and competent public health workforce.
- **Health service quality and equity:** improving appropriateness, quality and equity in the provision of and access to health services.
- **Public health research, evaluation and knowledge:** advancing public health research and knowledge development.
- **Access to and utilization of health products, supplies, equipment and technologies:** promoting equitable access to and rational use of safe, effective and quality-assured health products, supplies, equipment and technologies.

Note: Following expert consultation, the wording of the 12 EPHFs has been updated here to provide more clarity in the operational scope of each function, based on the unified list published by WHO in 2021. There is no significance to the ordering of the list presented here: each EPHF is fundamental to the effective delivery of public health, with prioritization depending on country context.

■ **Fig. 1.** Ireland’s reorganization of the EPHFs according to its domains of public health medicine



Source: (35).

3. The EPHFs and their subfunctions

Each EPHF describes a high-level activity that can be divided into subfunctions (see Table 1). The subfunctions represent the discrete actions required to carry out each EPHF. Depending on organizational factors, groups or individuals may be responsible for delivering one or more subfunctions. In some cases, subfunctions are discrete, but most subfunctions are interdependent, and interconnected both within and across the EPHFs. Examples are shown in Fig. 2. Dividing EPHFs into subfunctions clarifies the operational scope and limits of individual EPHFs to support countries in identifying the necessary actions and capacities needed to deliver the EPHFs.

■ **Table 1. List of subfunctions for the 12 EPHFs**

	Subfunctions
EPHF 1: Public health surveillance and monitoring Monitoring and surveillance of population health status, risks, protective and promotive factors, threats to health, and health system performance and service utilization	Subfunction 1.1: Planning for public health monitoring and surveillance
	Subfunction 1.2: Routine and systematic collection of public health data
	Subfunction 1.3: Analysing and interpreting available public health data
	Subfunction 1.4: Communicating public health data, information and evidence with key stakeholders, including communities
EPHF 2: Public health emergency management Managing public health emergencies for international and national health security	Subfunction 2.1: Monitoring and analysing available public health information to identify and anticipate potential and priority public health risks, including public health emergency scenarios
	Subfunction 2.2: Planning and developing capacity for public health emergency preparedness and response as part of routine health system functioning in collaboration with other sectors, including development of a national health emergency response operations plan
	Subfunction 2.3: Carrying out and coordinating effective and timely public health emergency response activities while supporting the continuity of essential functions and services
	Subfunction 2.4: Planning and implementing recovery from public health emergencies with an integrated health system strengthening approach
	Subfunction 2.5: Engaging with affected communities and stakeholders in the public and private sectors and health and allied sectors as part of whole-of-government and whole-of-society approaches to public health emergency management

	Subfunctions
<p>EPHF 3: Public health stewardship</p> <p>Establishing effective public health institutional structures, leadership, coordination, accountability, regulations and laws</p>	Subfunction 3.1: Advocating public health-oriented planning, policies and strategies
	Subfunction 3.2: Strengthening institutional public health structures for the coordination, integration and delivery of public health functions and services in the health and other sectors
	Subfunction 3.3: Developing, monitoring and evaluating public health regulations and laws that act as formal, regulatory, institutional frameworks for public health governance, functions and services
	Subfunction 3.4: Maintaining and applying public health ethics and values in governance
<p>EPHF 4: Multisectoral planning, financing and management for public health</p> <p>Supporting effective and efficient health systems and multisectoral planning, financing and management for public health</p>	Subfunction 4.1: Conducting evidenced-based health system planning and prioritization for managing population health needs, including alignment of national strategies, policies and plans for public health
	Subfunction 4.2: Promoting integrated cross-sectoral prioritization and planning for public health with intersectoral accountability mechanisms and WHO's Health in All Policies approach to manage population health needs
	Subfunction 4.3: Promoting sustainable and integrated financing for public health by improving the generation, allocation and utilization of public and pooled funds to strengthen health system foundational capacities in all contexts
	Subfunction 4.4: Planning and developing appropriate infrastructure for meeting population health needs, including key services in health facilities (e.g. water, sanitation, waste and energy)
	Subfunction 4.5: Monitoring and assessment of policies and plans, financing of health systems, and multisectoral efforts for health that improve public health, promote equity and inclusion and strengthen resilience
<p>EPHF 5: Health protection</p> <p>Protecting populations against health threats, for example, environmental and occupational hazards, communicable and noncommunicable diseases, including mental health conditions, food insecurity, and chemical and radiation hazards</p>	Subfunction 5.1: Developing, implementing, monitoring and evaluating regulatory and enforcement frameworks, including compliance with international legislation, and mechanisms for the protection of specified populations (e.g. workers, patients and consumers) and the general public from health hazards
	Subfunction 5.2: Conducting risk assessments, risk communication and other risk management actions needed for all manner of health hazards
	Subfunction 5.3: Monitoring, preventing, mitigating and controlling confirmed and potential health hazards

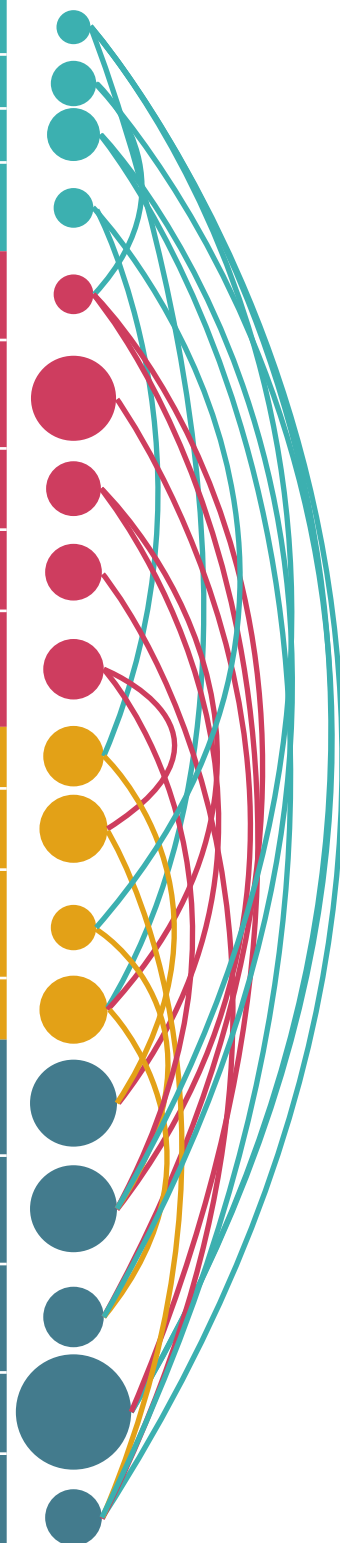
	Subfunctions
<p>EPHF 6: Disease prevention and early detection</p> <p>Prevention and early detection of communicable and noncommunicable diseases, including mental health conditions, and prevention of injuries</p>	Subfunction 6.1: Designing, implementing, monitoring and evaluating interventions, programmes, services and platforms for primary, secondary and tertiary prevention, including consideration of equity
	Subfunction 6.2: Integrating consideration of prevention and early detection into service delivery platform design or redesign
	Subfunction 6.3: Working with partners to support the development, implementation and monitoring of legislation, policies and programme activities aimed at reducing exposure to risk factors and promoting factors that prevent disease
<p>EPHF 7: Health promotion</p> <p>Promoting health and well-being as well as actions to address the wider determinants of health and inequity</p>	Subfunction 7.1: Designing, implementing and evaluating specific interventions or programmes to promote health, including changes in behaviours, lifestyle, practices and the environmental and social conditions that promote health and reduce health inequities
	Subfunction 7.2: Taking and supporting action, with partners, to address wider determinants of both communicable and noncommunicable diseases through a whole-of-government, whole-of-society approach, including increasing individual and community participation in health-impacting decisions
	Subfunction 7.3: Advocating, developing and monitoring legislation and policies aimed at promoting health and healthy behaviours and reducing inequities
	Subfunction 7.4: Undertaking evidence-based advocacy and health communication to promote healthy behaviours and socioecological environments and build community trust
<p>EPHF 8: Community engagement and social participation</p> <p>Strengthening community engagement, participation and social mobilization for health and well-being</p>	Subfunction 8.1: Promoting participatory decision-making and planning for health and the promotion of societal changes that enhance, promote and protect health and well-being
	Subfunction 8.2: Building community capacity for participating in public health planning, interventions, services and preparedness and response measures
	Subfunction 8.3: Monitoring and evaluation of community engagement in public health planning, interventions, services and preparedness and response measures to promote equity and inclusion
	Subfunction 8.4: Mobilizing and collaborating with communities and civil society groups in health services, interventions and programmes as part of a whole-of-society approach
	Subfunction 8.5: Engaging communities in health preparedness, readiness, response and recovery
<p>EPHF 9: Public health workforce development</p> <p>Developing and maintaining an adequate and competent public health workforce</p>	Subfunction 9.1: Undertaking planning and regular monitoring and evaluation of the public health workforce in relation to density, distribution and skills mix required to meet population health needs
	Subfunction 9.2: Assessing and developing the education and training of the public health workforce, encompassing the full spectrum of public health competencies (e.g. technical, strategic and leadership skills), including development of essential competencies for intersectoral work for health and for emergency response
	Subfunction 9.3: Promoting the sustainability of the public health workforce by developing appropriate career pathways and assessing and creating safe and dignified working conditions

	Subfunctions
EPHF 10: Health service quality and equity Improving appropriateness, quality and equity in the provision of and access to health services	Subfunction 10.1: Assessing and improving the quality and appropriateness of health services and social care services as delivered to meet population health needs
	Subfunction 10.2: Assessing and promoting equity in the provision of and access to health and social care services
	Subfunction 10.3: Aligning the planning and delivery of health services and social care services with population health needs and priority risks
EPHF 11: Public health research, evaluation and knowledge Advancing public health research and knowledge development	Subfunction 11.1: Strengthening and broadening the capacity to conduct and promote research in order to enhance the knowledge base and inform evidence-based policy, planning, legislation, financing and service delivery at all levels and in all contexts
	Subfunction 11.2: Supporting knowledge development and implementation, including the translation of public health research into decision-making based on the best available evidence and practices for addressing population health needs
	Subfunction 11.3: Promoting the inclusion and prioritization of public health operational research within broader research agendas
	Subfunction 11.4: Promoting and maintaining ethical standards in public health research that promote a human rights-based approach to health
EPHF 12: Access to and utilization of health products, supplies, equipment and technologies Promoting equitable access to and rational use of safe, effective and quality-assured health products, supplies, equipment and technologies	Subfunction 12.1: Developing and implementing policies, laws, regulations and interventions that promote the development of and equitable access to essential medicines and other medical products and health technologies in both national and international contexts
	Subfunction 12.2: Developing and implementing evidence-based standards, laws, regulations, policies and interventions that ensure the safety, affordability and efficacy of essential medicines and other medical products and health technologies
	Subfunction 12.3: Working with partners to manage the inclusion of evidence-based essential medicines and other medical products, health technologies and non-pharmacological interventions into clinical and public health practices
	Subfunction 12.4: Managing supply chains for essential medicines and other medical products and health technologies in support of their rational use and equitable access in both national and international contexts, including stockpiling and prepositioning essential medicines, equipment and supplies
	Subfunction 12.5: Monitoring and assessing the safety, effectiveness, efficacy and utilization of, and access to, essential medicines and other medical and surgical products, health technologies and non-pharmacological interventions, in clinical and public health settings

Note: There is no significance to the ordering of the list presented here: each EPHF is fundamental to the effective delivery of public health, with prioritization depending on country context.

Fig. 2. Illustration of interconnectedness and interdependence of subfunctions, with examples of EPHF 1–4

EPHF 1: Public health surveillance and monitoring	Subfunction 1.1: Planning for public health monitoring and surveillance
	Subfunction 1.2: Routine and systematic collection of public health data
	Subfunction 1.3: Analysing and interpreting available public health data
	Subfunction 1.4: Communicating public health data, information and evidence with key stakeholders, including communities
EPHF 2: Public health emergency management	Subfunction 2.1: Monitoring and analysing available public health information to identify and anticipate potential and priority public health risks, including public health emergency scenarios
	Subfunction 2.2: Planning and developing capacity for public health emergency preparedness and response as part of routine health system functioning in collaboration with other sectors, including development of a national health emergency response operations plan
	Subfunction 2.3: Carrying out and coordinating effective and timely public health emergency response activities while supporting the continuity of essential functions and services
	Subfunction 2.4: Planning and implementing recovery from public health emergencies with an integrated health system strengthening approach
	Subfunction 2.5: Engaging with affected communities and stakeholders in the public and private sectors and health and allied sectors as part of whole-of-government and whole-of-society approaches to public health emergency management
EPHF 3: Public health stewardship	Subfunction 3.1: Advocating public health-oriented planning, policies and strategies
	Subfunction 3.2: Strengthening institutional public health structures for the coordination, integration and delivery of public health functions and services in the health and other sectors
	Subfunction 3.3: Developing, monitoring and evaluating public health regulations and laws that act as formal, regulatory, institutional frameworks for public health governance, functions and services
	Subfunction 3.4: Maintaining and applying public health ethics and values in governance
EPHF 4: Multisectoral planning, financing and management for public health	Subfunction 4.1: Conducting evidenced-based health system planning and prioritization for managing population health needs, including alignment of national strategies, policies and plans for public health
	Subfunction 4.2: Promoting integrated cross-sectoral prioritization and planning for public health with intersectoral accountability mechanisms and WHO's Health in All Policies approach to manage population health needs
	Subfunction 4.3: Promoting sustainable and integrated financing for public health by improving the generation, allocation and utilization of public and pooled funds to strengthen health system foundational capacities in all contexts
	Subfunction 4.4: Planning and developing appropriate infrastructure for meeting population health needs, including key services in health facilities (e.g. water, sanitation, waste and energy)
	Subfunction 4.5: Monitoring and assessment of policies and plans, financing of health systems, and multisectoral efforts for health that improve public health, promote equity and inclusion, and strengthen resilience



Note: The lines connecting circles indicate that two subfunctions are closely linked and their implementation relies on each other. The size of the circle roughly reflects the degree of interconnectedness and interdependence of a specific subfunction with other subfunctions. The figure is illustrative for a non-specific setting; it is not an exhaustive mapping of the interconnectedness and interdependence among subfunctions.



4. Public health services and system enablers

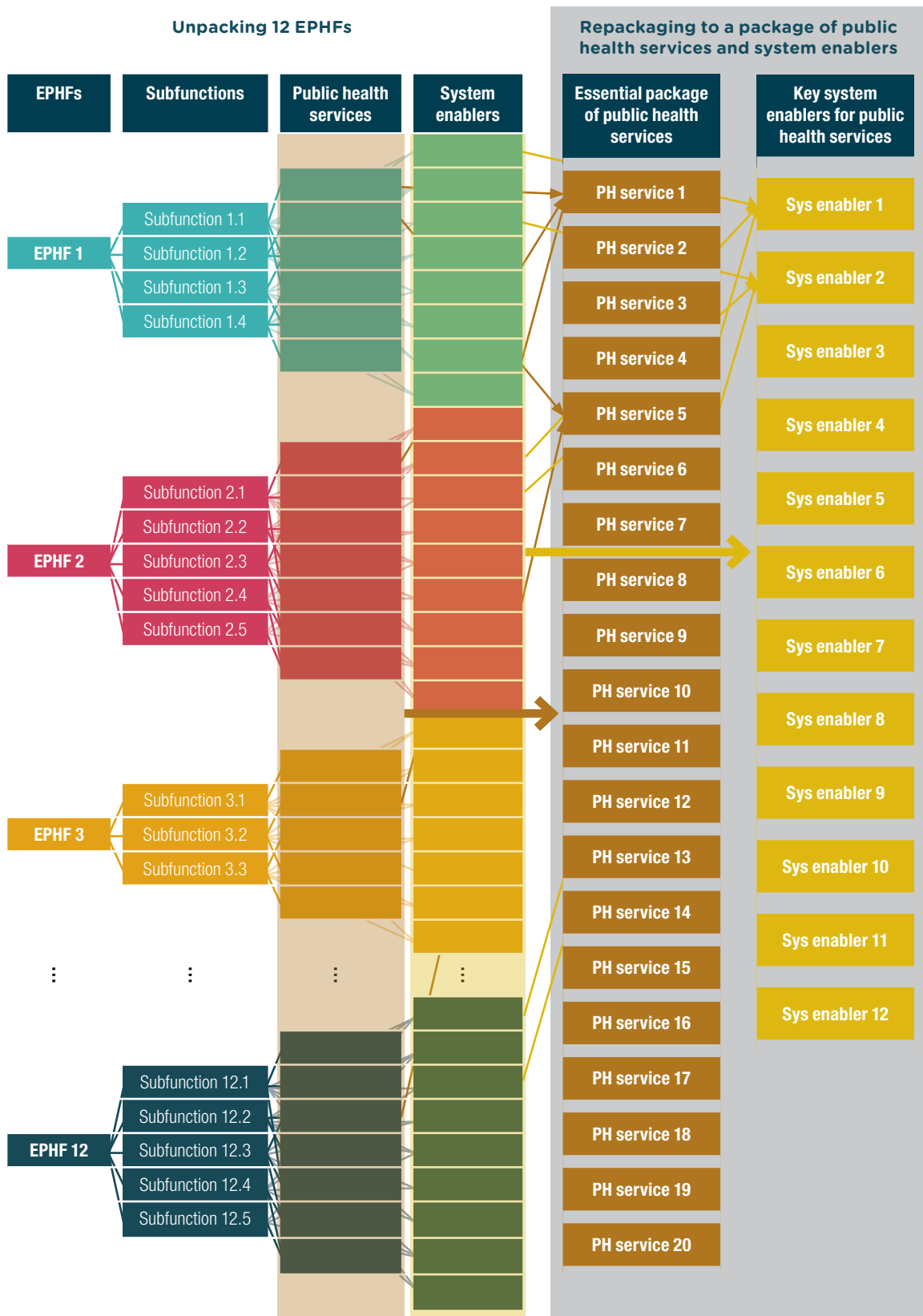
To support operationalization of the EPHFs from the perspective of service delivery, each of the 12 EPHFs in the unified list was “unpacked”, first into subfunctions and then into public health services and system enablers (see Box 2). This unpacking process, described in *Application of the essential public health functions: an integrated and comprehensive approach to public health (33)*, was informed by a review of existing academic and grey literature. The expanded list of public health services and system enablers was then streamlined into an essential package (see Fig. 3) leveraging and adjusting the overlapping elements. Both the unified list with subfunctions and the essential package of public health services and system enablers can be applied, adapted and further specified for a national context.

Box 2. Definitions of public health services and system enablers

Public health services are actions intended primarily to improve population-level health outcomes, including promoting health equity, while reducing risks and promoting health at the individual level. Public health services reflect a wide range of actions (e.g. policy and legislation development and implementation; clinical services; social measures; knowledge, awareness, attitude and behaviour change; environmental modification; and communication and advocacy). These services, which seek to positively impact the broader determinants of health and wider issues relating to health promotion and protection, are delivered across various sectors, including health, agriculture, environment, education, transport and housing.

Public health system enablers are the public health infrastructure, capacities, institutional arrangements and processes that are required to ensure the comprehensive and integrated delivery of public health services.

■ Fig. 3. Unpacking and repackaging of the EPHFs



4.1 Public health services

Public health services are an essential component of integrated health services and are necessary to achieve universal health coverage, health security and healthier populations (36). A list of 20 essential public health services is presented in Table 2. The range of services presented includes the full range of preventive, promotive, protective and information services contained in the unified list of 12 EPHFs and represents the full breadth of public health activities encapsulated in that list. The services are intended to support national-level planning and are presented in a way that supports flexible adaptation within a national context. The services to be provided span a continuum from specific clinical services and behavioural change interventions to the development and monitoring of policy and other multisectoral approaches to address the wider determinants of health. Examples for each service are provided for illustrative purposes only, and are not exhaustive. Instead, they give specific examples from country service delivery settings. How the services are prioritized and delivered depends on the country context, reflecting its population needs, national priorities and availability of resources. An illustrative tool mapping services against service and administrative delivery levels and allied sectors is provided in Table 3.

Table 2. List of public health services with illustrative examples

Domains ^a	Public health services	Examples of public health services ^b
Public health information management services	1. Ongoing and systematic surveillance and monitoring of public health-related data, including population health status, health-related behaviours, disease incidence and prevalence, and health risks and hazards	<ul style="list-style-type: none"> • Infectious disease surveillance • Population risk factor surveillance (e.g. smoking, physical inactivity, etc.) • Environmental surveillance of air, soil and water • Surveillance of antimicrobial resistance • Surveillance of adverse events following immunization
	2. Monitoring and evaluation of health systems, services and interventions, including health system performance, the health workforce, health service utilization and user satisfaction, and health system threats and vulnerabilities	<ul style="list-style-type: none"> • Monitoring of the coverage of essential health services (e.g. vaccination uptake, institutional deliveries, etc.) and evidence-based care practices (e.g. early initiation of breastfeeding, exclusive breastfeeding, etc.) • Patient satisfaction surveys • Monitoring of the continuity of essential health services during health emergencies • Monitoring of key impact indicators (e.g. maternal mortality ratio, infant mortality rate, stillbirth rate, etc.) • Monitoring and reporting on compliance with the International Health Regulations (2005) • Performance of external quality assessment procedures in all health care facilities (e.g. certification, accreditation and audits) • Monitoring of the availability of essential resources (e.g. medicines, equipment, diagnostics and supplies) at health care facilities, according to their level of care

Domains ^a	Public health services	Examples of public health services ^b
Public health information management services, cont.	3. Population health needs assessment and risk profiling to inform policies, planning, financing and management of population health	<ul style="list-style-type: none"> • Community health needs assessment • Rapid health needs assessment during emergencies • Assessment of health needs of vulnerable populations such as migrants and refugees • Multisectoral risk profiling exercise to identify and classify priority risks at the national level • Risk and vulnerability assessment of health facilities to inform business and health service continuity planning • Profiling health and safety risks for large, medium and small businesses to inform contingency planning
	4. Syntheses and analyses of available data and evidence (including health, behavioural, social and other multisectoral data and information) to inform decision-making	<ul style="list-style-type: none"> • Analysis of health and health system performance indicators and data to support health sector review and planning • Provision of multidisciplinary behavioural and social science strategic analysis and advice based on data, evidence and theory to inform policy- and decision-making • Provision of expert and rapid behavioural insights advice for policy-making including: problem definition; identification of barriers, interventions and research options; and rapid review and recommendations for improvement of policies, programmes, services or communications • Define and diagnose behaviours and their influences through evidence synthesis and participatory primary mixed-methods research • Evaluate impact, process and value for money, including experimental and quasi-experimental approaches where appropriate • Enable communities, stakeholders and users to contribute to policy-making and the evidence that feeds into policies and practice • Develop and disseminate guides and tools, design and deliver training, and establish networks for peer learning of up-to-date scientific evidence • Development of policy briefs, white papers and other media to inform senior decision-makers • Local health profiles with national benchmarks publicly available • Utilization of data provided by local and state public health departments to determine priority areas of focus for population health and social needs • Interpretation of raw data gathered from population surveys, disease registries, hospital records and other sources to support public health planning • Analysis and monitoring of the public health workforce to understand baseline capacities, including density relative to population, skills mix, competency, geographical distribution, mobility and entry and exit rates

Domains ^a	Public health services	Examples of public health services ^b
Health protection services	1. Emergency, contingency and incident planning for public health incidents and emergencies with an all-hazards risk management approach	<ul style="list-style-type: none"> • Preparation and testing of emergency response and recovery plans using an all-hazards and participatory approach applied at all service delivery levels • Regular update of national multisectoral, all-hazards emergency preparedness and response activities and supporting policies and procedures with dedicated financial and human resources • Health services continuity planning • Simulation exercises • Stockpiling of medical countermeasures for identified priority risks
	2. Prevention, mitigation, management and control of health hazards in a defined population	<ul style="list-style-type: none"> • Occupational health programmes • Environmental health programmes • Food safety programmes • Inspection of hygiene
	3. Incident response actions	<ul style="list-style-type: none"> • Rapid health needs assessment during emergencies • Outbreak, cluster and incident investigation and response • Case management • Implementation of appropriate policies and standard operating procedures to ensure the continuous delivery of essential health services • Maintenance of essential health services • Maintenance of essential infrastructure, including water, electricity and cold chain • Multisectoral coordination during preparedness, readiness and response • Community engagement and risk communication during preparedness, readiness and response
Health promotion services	1. Development, implementation, monitoring and evaluation of health literacy interventions and programmes enhancing the accessibility of health information and empowering communities to participate in public health planning and services	<ul style="list-style-type: none"> • Community health literacy programmes on health insurance • Diabetes literacy and numeracy education toolkit • Patient, family and community engagement and education on palliative care to address taboos and lack of understanding • Health ministry distributing posters and leaflets targeting particularly vulnerable groups to inform them of their entitlements and requiring such posters to be displayed at the entrance to health facilities • Social and behaviour change communication campaigns to improve community awareness and demand generation for essential health services (e.g. routine immunization)
	2. Development, implementation, monitoring and evaluation of health-promoting activities, programmes, services and interventions targeting determinants of health	<ul style="list-style-type: none"> • Smoking ban • National tobacco control programme with the aim of developing greater awareness of the harmful effects of tobacco and existing tobacco control legislation • Defining the package of sexual and reproductive care to be delivered

Domains ^a	Public health services	Examples of public health services ^b
Health promotion services, cont.	3. Priority health promotion programmes and services targeting specific risks, settings or populations, based on population need and priority risks	<ul style="list-style-type: none"> • Smoking cessation services • Campaigns to raise awareness of skin cancer and skin protection • School food programmes (e.g. healthy lunches and providing food for disadvantaged children) • Chronic disease self-management programmes • Sexual and reproductive health interventions and services, including family planning services, counselling to sex workers and other high-risk populations, and pre- and post-termination support services • Targeted behavioural modification for risk factors, including brief interventions for behaviour change within primary care and referral for specific support services (e.g. smoking cessation) from primary, secondary and tertiary care • Targeted history and physical examination for risk factor identification and modification • Health education aimed at promoting health and health literacy among specific populations, including school health programmes and school sexual education programmes
	4. Working within the health sector, with partners and allied sectors, to develop environments that support health and healthy behaviours and reduce inequities through actions on the wider determinants of health	<ul style="list-style-type: none"> • Working with ministries – including ministries of the interior and financing – to develop and implement national tobacco control programmes • Working with the education sector on national school food and nutrition programmes • Working with the ministry of planning and local administrations and authorities to create healthy cities
Disease prevention services	1. Development, implementation and monitoring and evaluation of actions, programmes and interventions that aim to prevent adverse health outcomes, based on population need and equity (primary prevention)	<ul style="list-style-type: none"> • Development of national immunization guidelines • Development of preconception care programme • Development of food fortification programme • Universal immunization programme providing vaccines to infants, children, pregnant women and other vulnerable groups for the prevention of priority diseases • Targeted vaccinations for specific groups, including people travelling to high-risk areas and health and social care workers • Targeted vaccinations in response to emerging health threats • Regular monitoring and evaluation of screening services to ensure quality, effectiveness and equity • Newborn and early childhood screening, such as congenital malformations, newborn bloodspot and developmental delay • Fall prevention programmes targeted at elderly people • Noncommunicable disease prevention and control programmes

Domains ^a	Public health services	Examples of public health services ^b
Disease prevention services, cont.	2. Development, implementation, monitoring and evaluation of actions, programmes and interventions that support early identification and appropriate management of health risks to minimize their impact based on population need and equity (secondary prevention)	<ul style="list-style-type: none"> • Development of national cancer control programme • Identification of priority screening programmes based on population risks • Screening for disease and physical, environmental, behavioural and social risk factors • Opportunistic screening, including routine physical examinations, screening for intimate partner violence and abuse of older people and children, and implementing the Making Every Contact Count programme • Screening for self-harm and suicide risk in people with mental, neurological and substance use conditions • Periodic review of disease prevention policies and programmes • Substance-related harm reduction programmes • Homeless health and social services • Noncommunicable disease prevention and control programmes
	3. Development, implementation and monitoring of actions, programmes and interventions that minimize disease progression, complications or impacts (tertiary prevention)	<ul style="list-style-type: none"> • Integration of secondary prevention in chronic disease management programmes • Defining chronic disease rehabilitation packages (e.g. cardiac, pulmonary and stroke) • Development of national programmes for prevention and control of chronic diseases (cancer, diabetes, cardiovascular diseases and stroke) • Ensuring access to palliative care services based on needs • Provision of long-term care
Cross-cutting services	1. Development, implementation, monitoring and evaluation of public health institutional structures and capacities, including legislation, regulations, policies, institutions and workforce	<ul style="list-style-type: none"> • Development of tobacco control legislation • Defined minimum list of services, including public health services, that all regional and local health authorities need to deliver • Development of national emergency planning guidelines informing emergency planning in health facilities • Timely reporting of internationally and nationally notifiable diseases in accordance with the International Health Regulations (2005) and state laws • Developing the public health workforce with respect to quantity and quality, in alignment with population health needs • Review of delivery of the EPHFs with regard to policy, planning, infrastructure and service delivery • Review of the Public Health Act • Health impact assessment of policies outside the health sector
	2. Promotion and development of cross-organizational and multisectoral responsibility and accountability for health and well-being	<ul style="list-style-type: none"> • Participation in One Health mechanisms • Inclusion of multisectoral stakeholders in the planning, development, implementation, monitoring and evaluation of public health strategies • Consultative process for legislation • Monitoring of health service utilization and access in both public and private sectors • Co-design and pilot context-appropriate interventions using data, evidence and theory to select policy options, modes of delivery and behaviour change techniques

Domains ^a	Public health services	Examples of public health services ^b
Cross-cutting services, cont.	3. Advocating, implementing and evaluating a community participatory approach to public health planning, including health system planning and health service design that centres around the values of inclusion and equity	<ul style="list-style-type: none"> • Patient experience surveys • Community involvement in population health needs assessment • Awareness-raising campaigns for community engagement in planning and delivering public health services and programmes • Community-led programmes to support retention in HIV care and adherence to HIV treatment • Identification of healthy food items in partnership with local restaurants and grocery stores • Establishment of food-sharing collectives to support vulnerable populations and reduce food waste • Periodic evaluations and subsequent refinement of communication strategy performed
	4. Communication between relevant stakeholders that ensures the timely exchange of appropriate and accessible information relating to actual and potential public health issues	<ul style="list-style-type: none"> • Dissemination of annual health statistical reports on official website and social media to reach key stakeholders, including the public • Reporting on the Sustainable Development Goals and the International Health Regulations (2005) • Intersectoral risk communication to communicate public health threats transparently • Exchange of local-level good practices between municipalities at conferences and forums • Hotline services that members of the public can use to raise concerns or make requests direct to relevant ministers, supported by collaboration with mass media to raise awareness • Information campaign to targeted populations to increase uptake of evidence-based health interventions (such as immunization)
	5. Working with partners in the health sector and allied sectors to provide high-quality health services to all populations in all contexts	<ul style="list-style-type: none"> • Consultative process for legislation • Monitoring of health service utilization and access in all contexts • Quality assurance • Provision of medical services to the homeless through nongovernmental organizations and civil society organizations
	6. Ensuring the availability and appropriate use of safe medicines and other medical products and health technologies in health services in support of better health outcomes and equity	<ul style="list-style-type: none"> • Development of an essential medicines list for the government and public health facilities to procure and prescribe • Providing tele-consultation options to hard-to-reach populations • Stockpiling and providing essential medicines in all primary health care facilities • Routine monitoring of medicine prices, availability and affordability • National spectacle programme delivered by the government and nongovernmental organizations • Health technology assessment

^a Domains: The scope of disease prevention, health promotion and health protection services often overlap, while the remaining cross-cutting services, including public health information management, guide the delivery of the other services. While recognized as cross-cutting, public health surveillance and monitoring is listed as a separate domain, considering its conceptual and practical profile.

^b The examples of public health services do not form an official WHO guideline; they aim to provide illustrative examples to help the reader understand the 20 high-level public health services.

Table 3. Illustrative mapping of delivery settings for public health services

Domains	Services	Delivery settings and levels			
		Primary and community care	Hospital sector	Administrative levels ^a	Allied sectors
Public health information management services	Ongoing and systematic surveillance and monitoring of public health-related data, including population health status, health-related behaviours, disease incidence and prevalence, and health risks and hazards	X	X	X	
	Monitoring and evaluation of health systems, services and interventions, including health system performance, the health workforce, health service utilization and user satisfaction, and health system threats and vulnerabilities	X		X	
	Population health needs assessment and risk profiling to inform policies, planning, financing and management of population health			X	X
	Syntheses and analyses of available data and evidence (including health, behavioural, social and other multisectoral data and information) to inform decision-making			X	X
Health protection services	Emergency, contingency and incident planning for public health incidents and emergencies with an all-hazards risk management approach	X	X	X	X
	Prevention, mitigation, management and control of health hazards in a defined population	X	X	X	X
	Incident response actions	X	X	X	X
Health promotion services	Development, implementation, monitoring and evaluation of health literacy interventions and programmes enhancing the accessibility of health information and empowering communities to participate in public health planning and services	X		X	X
	Development, implementation, monitoring and evaluation of health-promoting activities, programmes, services and interventions targeting determinants of health	X		X	X
	Priority health promotion programmes and services targeting specific risks, settings or populations, based on population need and priority risks	X	X		X
	Working within the health sector, with partners and allied sectors, to develop environments that support health and healthy behaviours and reduce inequities through actions on the wider determinants of health		X	X	X

Domains	Services	Delivery settings and levels			
		Primary and community care	Hospital sector	Administrative levels ^a	Allied sectors
Disease prevention services	Development, implementation, monitoring and evaluation of actions, programmes and interventions that aim to prevent adverse health outcomes, based on population need and equity (primary prevention)	X		X	
	Development, implementation, monitoring and evaluation of actions, programmes and interventions that support early identification and appropriate management of health risks to minimize their impact, based on population need and equity (secondary prevention)	X		X	X
	Development, implementation and monitoring of actions, programmes and interventions that minimize disease progression, complications or impacts (tertiary prevention)	X		X	X
Cross-cutting services	Development, implementation, monitoring and evaluation of public health institutional structures and capacities, including legislation, regulations, policies, institutions and workforce			X	X
	Promotion and development of cross-organizational and multisectoral responsibility and accountability for health and well-being	X	X	X	X
	Advocating, implementing and evaluating a community participatory approach to public health planning, including health system planning and health service design that centres around the values of inclusion and equity				X
	Communication between relevant stakeholders that ensures the timely exchange of appropriate and accessible information relating to actual and potential public health issues	X	X	X	X
	Working with partners in the health sector and allied sectors to provide high-quality health services to all populations in all contexts	X		X	X
	Ensuring the availability and appropriate use of safe medicines and other medical products and health technologies in health services in support of better health outcomes and equity	X	X	X	X

^a Administrative levels refer to organizational levels above front line or clinically facing services, such as district health offices, state health departments, ministries of health, specialized public health organizations (e.g. disease control centres and environmental health agencies).

4.2 System enablers

The effectiveness of public health services is strongly supported by key system enablers. These are summarized in Table 4. System enablers represent the core infrastructure, capacities and mechanisms that support integrative and multisectoral development of public health capacities for population health and well-being. The identified system enablers are broadly aligned with the input-related and cross-cutting health system building blocks, with the addition of multisectoral partnerships and community engagement. While many of these enablers are within existing health system setups, this list requires the health sector and allied sectors (with roles in public health) to develop certain characteristics (for example, a public health orientation or intentional design to build resilience) to support the integrated delivery of public health services.

■ **Table 4. Key system enablers for implementing public health services, including key considerations and examples**

System enablers	Key considerations to build resilient, public health oriented systems	Examples
1. Legislative, regulatory and policy frameworks and tools that underpin public health action	<ul style="list-style-type: none"> • Policy frameworks setting out a strategic vision for public health, including health equity • Regulatory and policy frameworks developed at the national or subnational level to guide the development and implementation of public health policies and programmes at the subnational and local levels • Legislation providing a clear outline of responsibilities and accountabilities at the governmental level for setting up structures to assess population health • Legislative, regulatory and policy frameworks and tools developed for priorities identified in population health needs assessment and risk profiling • Legislative, regulatory and policy frameworks and tools developed in allied sectors in support of addressing wider determinants of health 	<ul style="list-style-type: none"> • Legal framework for civil registration and vital statistics • Legal framework to support surveillance of notifiable diseases • Health and safety legislation • Frameworks for health system performance monitoring and evaluation • Public health emergency acts • Environmental standards and regulations in the areas of indoor air, outdoor air, water and soil • Cross-cutting policies and interventions to address the main behavioural risk factors for noncommunicable diseases

System enablers	Key considerations to build resilient, public health oriented systems	Examples
<p>2. Clear and aligned governance structures across national, subnational and local levels that enable the planning and delivery of public health activities at all levels (including formal arrangements between the public sector, private sector entities, development and humanitarian actors and communities)</p>	<ul style="list-style-type: none"> • National government commitment to public health as an explicit priority and adequate public health orientation within the health system • Public health institutes or the equivalent with a clear mandate to lead and coordinate public health functions • Clear and aligned government structures from national to local level that support consistent delivery of public health functions and services • Emergency preparedness and response coordination mechanisms with representation of units responsible for health system strengthening 	<ul style="list-style-type: none"> • Existence of a strong mandate or authority from public health agencies or the health ministry with regard to a wide range of public health functions • National health information analytical centre tasked to collect and collate routine data from public and private health facilities • Emergency management committee with the participation of key stakeholders • Veterinary and agricultural health units at all levels
<p>3. Mechanisms that promote and enable a multisectoral and integrated approach to planning, resource allocation, service delivery, monitoring and evaluation, through whole-of-government and whole-of-society approaches</p>	<ul style="list-style-type: none"> • Institutional capacity of the public health authority to advocate and influence the formulation and enactment of public health policies, legislation and regulations, and adoption of WHO's Health in All Policies approach in other sectors • Multisectoral partnerships in the health policy and intersectoral policy cycles • Multisectoral accountability mechanisms for public health • Mechanisms coordinating services delivered between service levels, organizations, private providers and nongovernmental organizations 	<ul style="list-style-type: none"> • Memorandum of understanding between public health authorities and law enforcement to enhance coordination of emergency preparedness across sectors • Executive order mandating the establishment of a Health in All Policies taskforce to oversee the initiative • Multisectoral mechanisms for risk monitoring and reduction (e.g. zoonosis and the animal–human interface) • National and regional health conferences with involvement of various actors advising health authorities on public health issues, including patient and citizen organizations, health professional associations, health product industries, health insurance providers and research institutions • Joint external evaluation involving stakeholders in health and allied sectors • Working with the private sector, nongovernmental organizations, civil society organizations and influencers in the community • One Health collaboration at national and local levels • Joint capacity-building activities (e.g. involving the human health, animal health and environment sectors)

System enablers	Key considerations to build resilient, public health oriented systems	Examples
<p>4. Mechanisms that promote and enable effective participation of communities, social actors and civil society in planning, delivering and assessing public health activities</p>	<ul style="list-style-type: none"> • Mechanisms and infrastructure to promote, empower and support communities in the articulation of their views and concerns about health and well-being • Mechanisms for building an environment in which well informed citizens are able to take decisions and responsibilities regarding their own health • Social accountability and listening mechanisms for public health policies, programmes, activities and services • Mechanisms to build community trust • Mechanisms to ensure transparency • Mechanisms for community participation in risk assessment, emergency response planning, testing of plans, design and implementation of integrated public health and service delivery, monitoring and evaluation, and intra-action and after-action review • Mechanisms for local governments, civil society and the nongovernment sector to participate in health emergency preparedness, response and recovery initiatives 	<ul style="list-style-type: none"> • Public consultation process on draft regulations, policies and guidance • Participation of community health groups in the development and implementation of plans for healthy cities and districts/counties • Community scorecards as part of a social accountability framework for a social action fund to promote sustained improvements in service delivery • Community environment monitoring within pollution-impacted communities • Community and civil society networks to transfer expertise, capacities, information, best practices and lessons learned • Involvement of nongovernmental organizations and networks of people living with HIV in awareness generation and behaviour change programmes
<p>5. Integrated information systems and mechanisms that enable interoperability and data sharing</p>	<ul style="list-style-type: none"> • Integrated surveillance and information systems that support systematic collection of data on population health, health system performance and health risks and determinants from both the health sector and allied sectors • Trusted public information, alert and communication systems 	<ul style="list-style-type: none"> • Health management information system administering and communicating data from health facilities to district, subnational and national administrative levels • Functional disease registries in compliance with the International Classification of Diseases • Integrated national surveillance systems linked to event-based surveillance and participatory surveillance to intensify active surveillance • Protocols for data exchange across subnational health information systems in decentralized health systems • Formalized data-sharing procedures and tools across sectors and among different levels • Interoperable electronic tools for public health surveillance • Electronic reporting and information system for infectious diseases connected with health facilities, laboratories and all health offices nationwide

System enablers	Key considerations to build resilient, public health oriented systems	Examples
<p>6. Adequate and competent public health workforce in line with population health needs and risk profiles</p>	<ul style="list-style-type: none"> • Consideration of density, geographical distribution, competencies and relevance in public health workforce planning, development and employment • Coordination of public health workforce development within and between health and allied sectors • Education and training to develop the needed competencies of the public health workforce, including both the core and non-core public health workforce • Licensing and credentialing the public health workforce, where relevant and appropriate • Mechanisms to incentivize, retain and develop the public health workforce • Capacity-building for community volunteers in different sectors 	<ul style="list-style-type: none"> • Development of a multisectoral workforce strategy and periodic updates, as and when required • Training of health and care workforce to collect and interpret public health data • Training primary health care workforce, including community health workers, for emergency preparedness and response, such as surveillance, risk assessment, risk control and emergency response • Surge deployment, roster of available technical specialists to advise in specific situations • Training of clinical staff to ensure appropriate focus on prevention at all service delivery levels • Inclusion of stakeholder analysis, interpretation and engagement with a participatory and collaborative approach, interpretation of public health data, policy and legislative development, and advocacy in public health workforce education and training curricula • Clear career trajectories for public health occupations
<p>7. Availability, accessibility and sustainability of financial resources in support of public health stewardship, capacity development and service delivery that address identified population health needs and health risk</p>	<ul style="list-style-type: none"> • Pooling, collection, mobilization and accumulation of financial resources to ensure comprehensive public financing for proven cost-effective public health functions and services to cover population health needs • Alignment of financial resource allocation with priority health and other sectors' policies, action plans and programmes to address public health problems • Consideration of upstream approaches to population health, which tend to be cheaper and more efficient and entail lower morbidity and mortality 	<ul style="list-style-type: none"> • Sustainable contingency fund • Stable budgets allocated to the national public health institute to support its implementation of core functions • Development of a prioritization framework for public health investment • Multiyear, long-term budgets for priority public health programmes • Earmarked taxes for financing priority public health issues

System enablers	Key considerations to build resilient, public health oriented systems	Examples
8. Mechanisms and processes that promote the integration or reintegration of public health services within horizontal service delivery platforms, as appropriate	<ul style="list-style-type: none"> • Mechanisms in support of integration or reintegration of vertical disease programmes in primary and hospital-based care • Effective horizontal integration in governance and organization structure to address disease-specific and life course-specific health concerns 	<ul style="list-style-type: none"> • Integration of preventive services (e.g. immunizations, preventive health examinations, routine check-ups to detect high blood pressure, diabetes and lung diseases, plus a breast examination and Pap smear test for women, and a prostate gland examination for men) and health promotion activities within primary care • Integrating the administrative and financial structure of noncommunicable disease control programmes into an integrated network of primary, secondary and a part of tertiary care, at district level
9. Appropriate infrastructure to support the delivery of public health services, in line with population health needs and health risks	<ul style="list-style-type: none"> • Connected laboratory networks • Availability and distribution of primary care facilities (centres, health posts) covering the whole population and based on their priority health needs, and with clearly defined responsibilities for delivering public health functions and services • Service delivery network for integrating primary care and specialized care in public health functions and services • Supporting and utilizing existing community structures to meet population health needs 	<ul style="list-style-type: none"> • Network of reference laboratories for monitoring, reporting and investigating antimicrobial resistance and zoonoses in all laboratories in the animal health, food safety, agriculture, environment and human health sectors • Cold chain infrastructure at the primary care level • Reliable information and communication systems supporting health communication • Mobilization of community resources to improve population health in line with population health needs and priority risks • Utilization of low-cost media (e.g. mobile technology, radio and the internet) to optimize resource use
10. Multilevel and multisectoral monitoring and evaluation activities that are integrated within public health strategies, policies and plans	<ul style="list-style-type: none"> • Multisectoral indicators defined in public health strategies, policies and plans • Organizations and institutes implementing relevant public health functions regularly are mandated to report their actions to higher public health authorities 	<ul style="list-style-type: none"> • Monitoring and evaluation framework in public health action plans • Structural, process and outcome indicators linked to time-based targets • Public health strategy with multisectoral indicators for health • Comprehensive monitoring system for antimicrobial resistance and antibiotic consumption across animal health, food safety, agriculture and environment sectors, reference laboratories, health care facilities, primary and community care centres and pharmacies

System enablers	Key considerations to build resilient, public health oriented systems	Examples
<p>11. Availability of essential medicines, medical, surgical or other health products, non-pharmacological interventions and technologies that support the delivery of public health services to meet population health needs</p>	<ul style="list-style-type: none"> • Mechanisms for the selection of essential medicines and other medical products and health technologies to meet population health needs in all contexts • Mechanisms for the procurement, stockpiling and distribution of essential medicines and other medical products and health technologies based on population health needs in all contexts • Mechanisms for use of essential medicines, medical, surgical and other health products, non-pharmacological interventions and technologies to support health equity 	<ul style="list-style-type: none"> • Stockpiling of essential medicines, pharmaceuticals, vaccines and nutritional and food supplements on the basis of risk profiles • Agreement between the government and private sector in supplying vaccines • Secure cold chain • Established donations and international aid agreement for essential medicines and medical products • Distribution of essential medicines to primary care facilities in rural and urban areas, supported by centralized procurement at the provincial/department/state level
<p>12. Mechanisms that promote and support alignment among public health research, policy and technology innovation, decision-making and priorities of population health needs and addressing health risks</p>	<ul style="list-style-type: none"> • Continued knowledge creation and development, and strengthening of the evidence base • Linking research findings in an accessible style for policy-makers and practitioners, in order to improve evidence-informed policy and practice • Processes of using research, evidence, practice-based insights, big and real-time data and other forms of information to inform decision-making, based on the availability, usability and reliability of health information 	<ul style="list-style-type: none"> • Forums or policy dialogues between the research community and policy-makers to facilitate the communication of policy-makers' needs to the research community and the uptake of evidence-informed policy, and to jointly set the public health research agenda • Agreement between the government and private sector on public health research and facilitating uptake of innovations • National institute for health and care research in partnership with patients, service users, carers and communities improving the relevance, quality and impact of public health research • Establishment of call for proposals for commissioned research, including independent research on the effectiveness of EPHF activities, in parallel with principal investigator-initiated research • Population health needs assessment to inform national public health research priorities • Maintenance of and access to health indicator databases for researchers, as appropriate

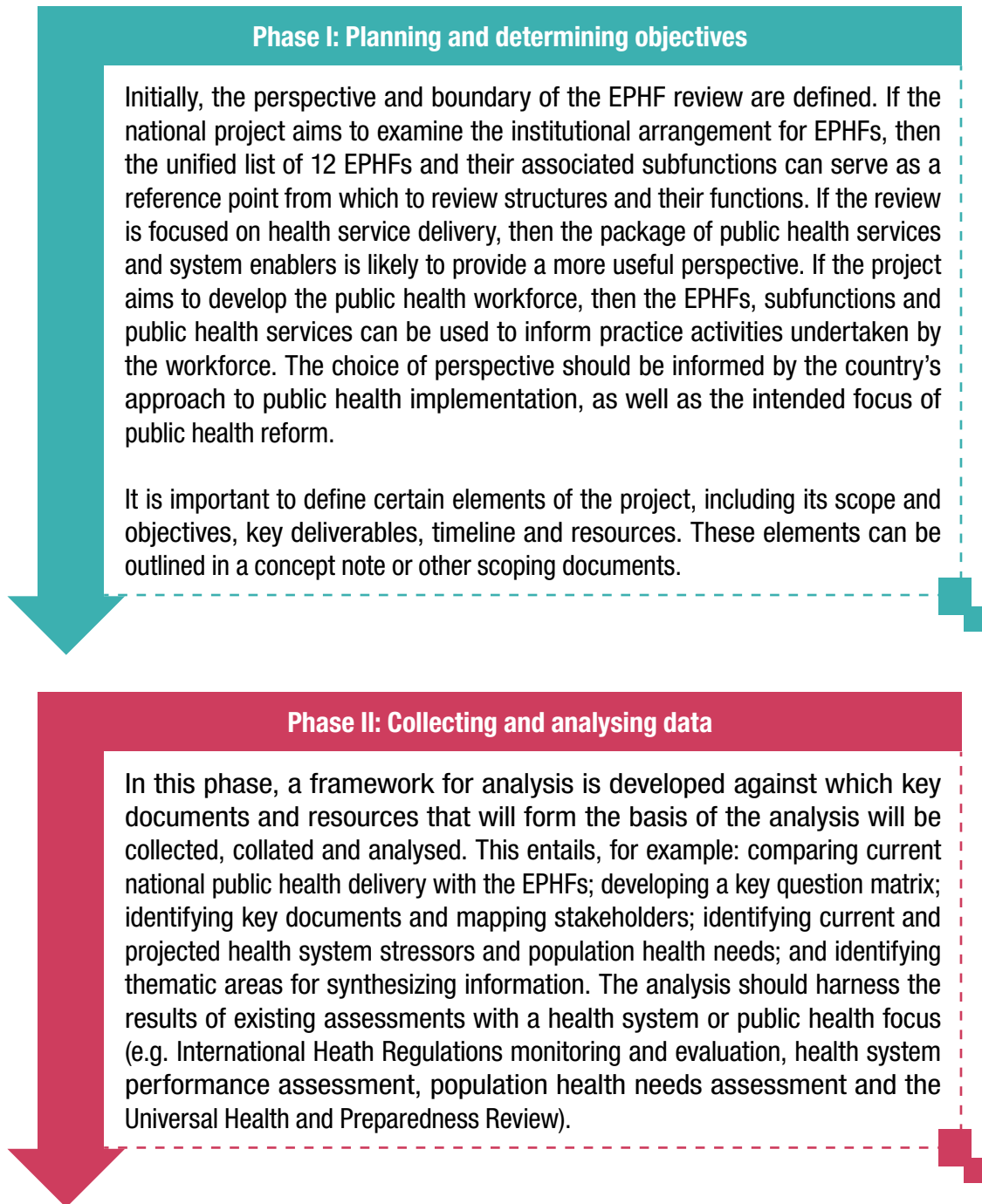
5. Strategic review of the EPHFs to understand and strengthen public health capacities and stewardship

A strategic review of the EPHFs in a national context enables the rapid establishment of baseline public health capacities and services, including their integration, and multisectoral elements that can be used to strengthen health systems with a comprehensive public health approach. This is recommended as the first step in applying the EPHFs. It consists of four phases: planning and determining objectives; collecting and analysing data; formulating findings and recommendations; and implementing recommendations to strengthen the delivery of the EPHFs. Fig. 4 provides details.

This process utilizes a thematic approach to determine national consideration of the EPHFs, including: policy and planning; inputs and infrastructure; service delivery; integration and coordination; and learning systems, monitoring and evaluation. Countries can select one or more thematic areas of interest as entry points for reviewing their public health system to make the review fit-for-purpose. Examples of different review purposes include: the development or renewal of a national public health strategy, health sector strategic development plan and/or emergency preparedness plan for public health emergencies; upskilling the public health workforce; institutional reform; strengthening public health services delivery and organization; and strengthening multisectoral action for health.

More details and tools can be found in *Application of the essential public health functions: an integrated and comprehensive approach to public health (33)*. An application of the strategic review of EPHFs in Ireland to inform its ongoing public health reform can be found in *Essential public health functions in Ireland: perspectives to strengthen public health capacities and stewardship (35)*.

■ Fig. 4. Phases of conducting a strategic review of EPHFs



Phase III: Formulating findings and recommendations

Ways of structuring findings include: mapping the actors involved in the delivery of public health functions or services at each level (i.e. administrative and service delivery levels) and how they are connected or integrated, in terms of the EPHFs, subfunctions or public health services of interest; mapping the degree to which the EPHFs are considered in each thematic area (e.g. policy and planning; inputs and infrastructure; service delivery; integration and coordination; and learning systems, monitoring and evaluation). Following data collation and analysis, several broad areas for action should become apparent. These may be either gaps and weaknesses to be addressed or strengths to be leveraged. Recommendations are arguably the most important part of the work and should be evidence-based. For recommendations to be actionable, they must be clear, succinct, specific and feasible. Ideally, recommendations should be expressed as one action-oriented sentence stating a specific action to address a specific gap or weakness identified in the report. Findings and recommendations should be formulated in alignment with the objectives and boundaries predetermined and agreed by key stakeholders.

Phase IV: Implementing recommendations to strengthen delivery

Securing political commitment, mobilizing all relevant stakeholders and mobilizing and leveraging resources (human, infrastructural and financial) are key for implementing recommendations to strengthen public health with an optimally funded planning process.

6. Conclusion

The EPHFs provide an integrated, comprehensive and affordable approach to strengthening public health in order to achieve multifaceted health objectives, including universal health coverage, health security, improved population health and well-being, and other Sustainable Development Goals. While the world is recovering from the COVID-19 pandemic and facing complex public health challenges, the EPHFs are intended to make health and allied systems more public health oriented, and thus to ensure the greatest benefit within available resources. This document can help to establish a shared understanding of the EPHFs, subfunctions and public health services. Countries can contextualize and apply the technical resources to support their public health strengthening and workforce development, including competency-based education and mapping and measurement of occupations.

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Annex 1. Survey of WHO's and partners' workforce strengthening activities to deliver the EPHFs: key findings

Introduction

Recognizing the urgent need for pre-emptive policies and plans to ensure a skilled and readily available workforce to deliver the EPHFs, WHO and its partners co-developed a public health workforce roadmap and action plan aimed at standardizing the definition, classification and scope of work for the workforce tasked with delivering the EPHFs and responding to future public health emergencies. The conceptual approach outlined in the roadmap rests on three interrelated action areas: defining the functions and services of the public health workforce; developing and enhancing competency-based education programmes for these personnel; and mapping and measurement of the current and future workforce. These action areas are envisioned to be implemented concurrently, with progressive achievement, based on individual country context.

However, national and global initiatives to strengthen the workforce to deliver the EPHFs have not been systematically mapped. This means there is a risk of duplication, gaps and lack of an integrated and coordinated approach. WHO conducted a survey of its departments and selected partners to better understand and systematically map public health workforce strengthening activities. The survey's aims were to:

- identify past, ongoing and planned activities, training and technical resources relating to the development of the public health workforce, including the emergency workforce;
- understand the areas of health workforce development that fall under wider public health (e.g. one or more of the EPHFs, including health emergency preparedness, readiness, response and/or recovery); and
- capture technical areas of focus, including resource materials that could inform next steps in the roadmap (i.e. defining functions and services, competency-based education, and mapping and measurement of occupations).

This annex presents the key findings and implications from the survey results.

Methods

Definitions

The EPHFs are defined as “a set of fundamental, interconnected and interdependent activities, both within and beyond the health sector, that are required to ensure effective public health action to prevent disease, promote and protect health and well-being, and address broad determinants of health”. A list

of the 12 EPHFs (see Box 1), proposed by WHO after an in-depth review of existing authoritative lists of EPHFs and consultations with partners, was used as the reference for designing this survey.

Target survey respondents

Target survey participants consisted of two groups: WHO departments (headquarters and regional offices) and WHO partner institutions.

Respondents at WHO headquarters were identified through the organogram: 39 departments or units in the Director-General's Office or Deputy Director-General's Office that are responsible for technical areas were included as target survey respondents. Those in charge of WHO's business operations or administration were excluded from the target survey respondents, as their work is not relevant to EPHF delivery. Invitations to participate in the survey were sent to directors or technical leads.

The scope of WHO partners surveyed included national public health institutes or equivalent, international public health networks and academic institutes. Outreach to partners was through the Public Health and Emergency Workforce Roadmap Steering Committee and its members' networks, for example, reaching out to national public health institutes through the International Association of National Public Health Institutes.

WHO headquarters and regional office departments were invited to participate in the survey between 30 September and 14 October 2022; WHO partners were invited to participate between 28 November and 16 December 2022.

Survey content

The survey for WHO departments consisted of nine questions in total, of which five were multiple choice and four were free text questions. The survey for WHO partners was a slightly adapted version and consisted of eight questions: three multiple choice and five free text questions. Survey topics included: basic information of the respondent's organization; history and current status of, and future plans for, workforce development activities; scope of workforce development activities in reference to the 12 EPHFs; advice on the list of EPHFs; and recommendations for reference materials and contact persons. The two surveys are available in Appendix 1 and 2.

Survey tool

The survey was administered using WHO's online survey platform DataForm, based on LimeSurvey Community Edition Version 3.28.28.

Analysis

Survey responses were exported to Microsoft Excel for data management and descriptive analysis. All data were checked for completeness and accuracy.

Results

Survey of WHO headquarters departments

Overview

There were 34 responses from WHO headquarters personnel from 26 different departments, including submissions from personnel in the same departments and from those in regional offices who responded through secondary dissemination by departments at WHO headquarters. The overall response rate for the survey of WHO headquarters departments was 67% (out of 39 eligible WHO departments). The responding departments cover those whose activities primarily contribute to universal health coverage, health security and healthier populations. One additional response was received directly from the OpenWHO Learning and Capacity Development Unit on training, resources and activities developed by the WHO Health Emergencies Programme.

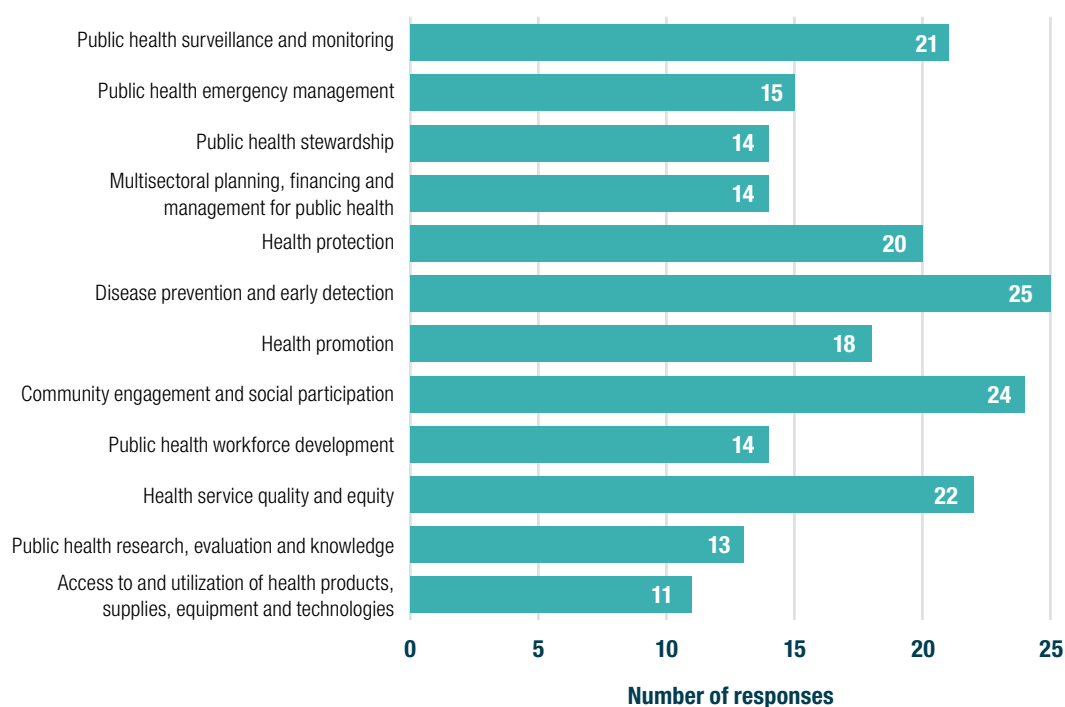
EPHF-related health workforce strengthening activities

In terms of activities between 2017 and 2021, all of the 26 WHO headquarters departments that responded to the survey indicated that they had either led or been involved in health workforce development activities. All respondents said that their past health workforce strengthening activities had been relevant to at least one of the EPHFs.

Regarding ongoing activities in the 2022–2023 biennium, all of the 26 WHO headquarters departments that responded reported carrying out health workforce strengthening activities that were relevant to one or more of the EPHFs, including health security preparedness, readiness, response and recovery.

WHO headquarters' departmental activities for health workforce development covered all 12 EPHFs (Fig. A1). More than 50% of respondents said that their health workforce development activities were relevant to disease prevention and early detection (74%), community engagement and social participation (71%), health service quality and equity (65%), public health surveillance and monitoring (62%), health protection (59%) and health promotion (53%). Less than 50% responded that their health workforce development activities were relevant to public health emergency management (44%), public health stewardship (41%), multisectoral planning, financing and management for public health (41%) and public health workforce development (41%). The lowest percentages were access to and utilization of health products, supplies, equipment and technologies (32%), and public health research, evaluation and knowledge (38%).

■ **Fig. A1. The scope of WHO headquarters departments' health workforce strengthening activities in relation to the 12 EPHFs (n=34)**



Recommendations to develop the public health workforce needed to deliver the EPHFs

In total, 27 non-repeated text responses were received in relation to recommendations on how to develop the public health workforce needed to deliver the EPHFs. The responses can be categorized into several threads. One thread involved recommendations on several public health workforce capacities considered to be inexplicitly covered by the 12 EPHFs, including capacities to: work with non-health sectors to address social determinants of health; uptake public health research; tackle stigma and discrimination; manage projects; communicate risk; adopt human rights-based, people-centred approaches that are responsive to the needs of all people concerned; rapidly adapt to a crisis context and vice versa; and manage infodemics and misinformation.

The second thread of recommendations was relevant to specific considerations in planning the public health workforce, including: application of an integrated approach to upskilling existing cadres of the workforce given workforce shortages; an integrated approach to developing a health workforce that operates in both emergency and peacetime situations; development of a cross-cutting multisectoral public health workforce, for example, for One Health; task sharing with the community health workforce and community-led services delivery and monitoring; utilization and involvement of the traditional and alternative health workforce; health workforce retention and motivation, including in remote locations; metrics and data on staffing levels of cadres as relevant to health services for specific populations; protection of the public health workforce, for example, vaccination against vaccine-preventable diseases; and health workforce and migration.

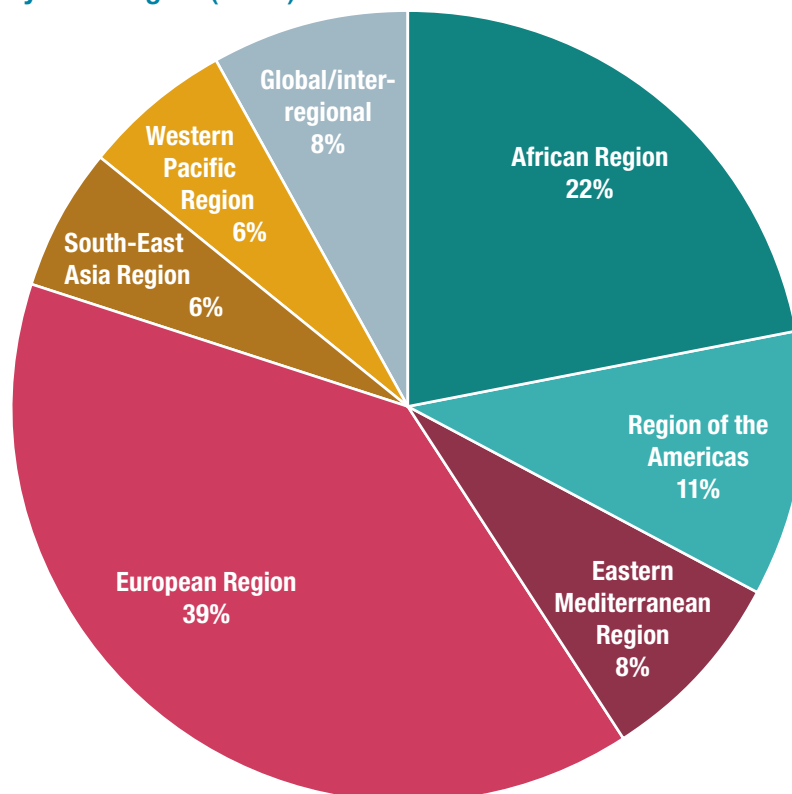
Another thread of recommendations was relevant to WHO internal activities in health workforce development, including the need for a more systematic approach and collaboration among departments, and improvement in WHO's own human resources planning.

Survey of WHO partner institutions and networks

Overview

In total, 26 complete responses were received from the target WHO partner institutes and networks, of which 20 were from national public health institutes or the equivalent, four were from academic institutes or institutions based in universities, and two were from global or regional public health networks or partnerships (Fig. A2). The geographic coverage of respondents' primary work included all six WHO regions, with some working globally and across multiple regions.

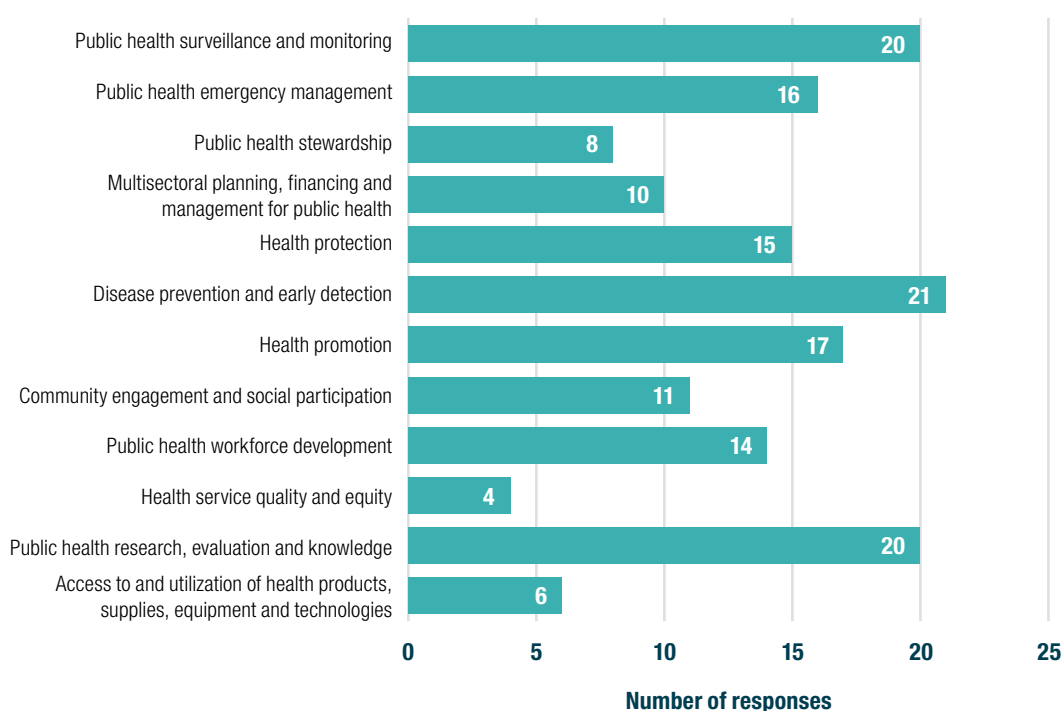
■ **Fig. A2. Geographic representations of participants of WHO partner institutes and networks, by WHO region (n=26)**



Health workforce strengthening activities and their scope in relation to the EPHFs

The work activities reported by WHO's partners covered all 12 EPHFs (Fig. A3). The most frequently reported were disease prevention and early detection (80%), public health surveillance and monitoring (77%) and public health research, evaluation and knowledge (77%). More than 50% of respondents also reported activities relevant to health promotion (65%), public health emergency management (62%), health protection (58%) and public health workforce development (54%). Less than 50% reported activities relevant to community engagement and social participation (42%), multisectoral planning, financing and management for public health (38%) and public health stewardship (31%). The two EPHFs with the lowest percentages were access to and utilization of health products, supplies, equipment and technologies (23%) and health service quality and equity (15%).

■ **Fig. A3. The scope of WHO partners' health workforce strengthening activities in relation to the EPHFs (n=26)**



EPHF-related activities at subnational level

In total, 81% (21 out of 26) of the respondents reported that they are involved in delivering the EPHFs at the subnational level and that the related activities covered a broad and varied range. Examples include: registration and training of public health workforce; occupational health and safety; public health surveillance and reporting; public health emergency operations; management of information systems; vaccination programmes; prevention and control of infectious diseases; laboratory services; health education; coordination; healthy development through the life course; and drug and addiction prevention and management.

Of those who responded, 19% (5 out of 26) reported that they are not involved in delivering the EPHFs at the subnational level. Three reported that their focus is at the global or regional levels. Two responded that they do not have a mandate to deliver EPHFs at the subnational level, but noted that they have a role in delivering specialized public health services and social care (for example, services targeted at domestic violence and prison health), or in delivering some EPHFs in special situations (for example, in emergencies).

Discussion

The survey was the first of its kind to understand the scope of WHO's and global, regional and national institutes' public health workforce development activities in relation to the EPHFs.

Within WHO headquarters, all departments have public health workforce activities relating to at least one of the 12 EPHFs. This finding suggests that the unified list of 12 EPHFs provides a comprehensive framework for and a shared understanding of operationalizing public health. This finding also corresponds to the legitimate need for a roadmap and action plan to align the approaches and efforts to develop a national public health workforce. Improved coordination and collaboration are also needed to ensure informed and consistent country support from WHO, as pointed out in some of the recommendations raised in the survey. The *National workforce capacity to implement the essential public health functions including a focus on emergency preparedness and response: roadmap for aligning WHO and partner contributions* can serve as a strong reference to support WHO's internal activities in relation to developing the national workforce required to deliver the EPHFs, including emergency preparedness and response.

At WHO headquarters, the services-oriented EPHFs (for example, disease prevention and early detection, health promotion, health protection, public health surveillance and public health emergency management) are well reflected in health workforce development activities. However, the enabling EPHFs (for example, public health stewardship, multisectoral planning, financing and management for public health, utilization of health products, supplies, equipment and technologies, and public health research, evaluation and knowledge) are less covered in health workforce development activities. Similar patterns were observed in the survey findings from WHO partners. While all 12 EPHFs are fundamental, interlinked and interdependent, this finding suggests the need for giving proportionate attention to developing the health workforce need to deliver the enabling EPHFs. Advancing public health research and knowledge was a common activity among the national and global public health institutes and networks that responded; but this EPHF is less common among WHO departments. This aligns with findings in other reports that research is a typical public health function carried out by national public health institutes. The EPHF relating to access to and utilization of health products, supplies, equipment and technologies is less covered in current health workforce development activities both in WHO and among partners. In the context of fast evolving innovations and their applications in promoting and protecting population health, this EPHF has gained increased recognition and needs to be factored into health workforce development activities.

Recommendations also suggested adopting an integrated approach to developing a public health workforce that operates in both emergency and peacetime situations, that is cross-cutting and

multisectoral and that has the competencies required to deliver all the EPHFs. This approach is aligned with lessons learned from the COVID-19 pandemic and other public health emergencies: emergency preparedness and response rely on community engagement, health promotion and disease prevention, among other EPHFs. The healthier a population is when faced with a pandemic, the healthier the population will be coming out of it. The role of public health stewardship and the public health workforce are key to operationalizing the EPHFs, enhancing multisectoral responsibility for health and building resilient health systems. The political momentum for and attention on pandemic preparedness (e.g. the Pandemic Fund initiative; the Independent Panel for Pandemic Preparedness and Response; and the global accord on pandemic prevention, preparedness and response) need to be leveraged to support strengthening the public health workforce so that it can deliver all the EPHFs. This in turn can accelerate progress towards universal health coverage and improved population health and well-being, as well as strengthening health security.

Limitations

The survey's main limitation was that not all technical departments/functions within WHO and among WHO partners participated. Within WHO headquarters, two thirds of the eligible technical departments or units responded. Some departments representing certain technical areas did not respond, which may have led to a lack of clarity about workforce activities in relation to some of the EPHFs being under- or over-represented in the survey results. However, this risk was mitigated by a balanced proportion among the responding departments working towards each of the triple billion targets (that is, 1 billion more people benefitting from universal health coverage, 1 billion more people better protected from health emergencies, and 1 billion more people enjoying better health and well-being). Among WHO partner institutes and networks, respondents were limited in terms of absolute numbers, and the geographic representation was skewed with more respondents located in Europe. This limitation made it challenging to disaggregate survey findings by WHO region and interpret regional differences regarding the scope of WHO Member States and partners' EPHF-related workforce activities.

Conclusions

While COVID-19 remains a threat, health systems and societies are facing a wide range of other pressing challenges, such as humanitarian crises, climate change and environmental threats, multimorbidity and emerging infectious agents. Now is the time to reflect on and incorporate what we have learned in order to build back better and more resilient health and other systems. The EPHFs encompassing preventive and promotive public health capacities, both within and beyond the health system, are essential to reduce health risks and the impact of shock events like COVID-19, and thus reduce the burden on secondary and tertiary care that occurs when public health systems fail. The effective and comprehensive implementation of the EPHFs, including emergency preparedness and response, led by a competent workforce with the appropriate skills and competencies, is key for recovery. There is a need to further define the scope of the EPHFs and related services at subnational levels, including primary care, in support of public health planning, including workforce development.

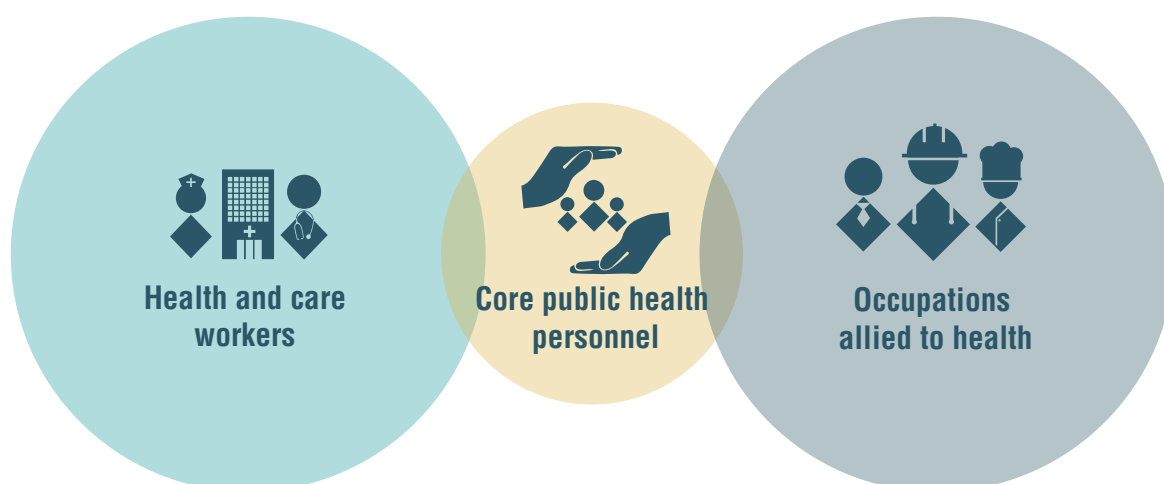
Appendix 1. WHO survey of its workforce strengthening activities to deliver the EPHFs

WHO launched a roadmap for strengthening the public health workforce just before the 75th World Health Assembly. Following this, we are conducting a survey initially within WHO to map health workforce strengthening activities and inform next steps in the roadmap and its action areas. The essential public health functions (EPHF) have been used to provide a conceptual framing to identify various activities for this exercise.

The purpose of this survey is to:

- identify past, ongoing and planned activities, training and technical resources relating to the development of the public health workforce, including the emergency workforce, within WHO;
- understand the areas of work related to the development of the health workforce that fall under different WHO divisions, including health emergencies, health promotion and universal health coverage; and
- capture technical areas of focus that could inform next steps in the roadmap and its three action areas.

By the public health workforce, we mean a broad workforce that includes those working outside the health sector and in the delivery of one or more of the 12 EPHFs, as illustrated in the figure below.



The survey should take approximately five minutes to complete.

There are nine questions in this survey. Questions 1-6 are mandatory.

1

What is the name of your department and division?

2

In which WHO office are you located?

- Regional Office for Africa
- Regional Office for the Americas
- Regional Office for South-East Asia
- Regional Office for Europe
- Regional Office for the Eastern Mediterranean
- Regional Office for the Western Pacific
- Headquarters

3

In the last five years, has your department led or been involved in any health workforce development activities?

- Yes
- No

4

Are any of the activities of your department related to health workforce strengthening that fall under wider public health (e.g. one or more of the EPHFs, including health emergencies or health security preparedness, readiness, response and/or recovery)?

- Yes
- No

5

In the current biennium, are you planning to carry out activities related to health workforce strengthening that fall under wider public health (e.g. one or more of the EPHFs, including health emergencies or health security preparedness, readiness, response and/or recovery)?

- Yes
- No

6

Which of the following EPHFs does your area of work on health workforce development most relate to?

- Monitoring and evaluating the population's health status, health service utilization and surveillance of risk factors and threats to health
- Public health emergency management
- Assuring effective public health governance, regulation and legislation
- Supporting efficient and effective health systems and multisectoral planning, financing and management for population health
- Protecting populations against health threats, including environmental and occupational hazards, communicable disease threats, food safety, and chemical and radiation hazards
- Promoting prevention and early detection of noncommunicable and communicable diseases
- Promoting health and well-being and actions to address the wider determinants of health and inequity
- Ensuring community engagement, participation and social mobilization for health and well-being
- Ensuring adequate quantity and quality of the public health workforce
- Assuring quality of and access to health services
- Advancing public health research
- Ensuring equitable access to and rational use of essential medicines and other health technologies

7

Do you have any advice on the EPHFs listed in question 6 in reference to their scope to cover the areas of your departmental focus? Are there any technical areas that you would like to recommend as part of public health workforce development?

8

Are there any references, resources and/or published or unpublished work that you can share about the health workforce-related activities that your department has led, been involved in, or is expecting to work on? If so, please provide details below.

9

Please recommend a contact person from your department who we can communicate with if needed (please provide a name, email address and any other relevant information).

End of survey

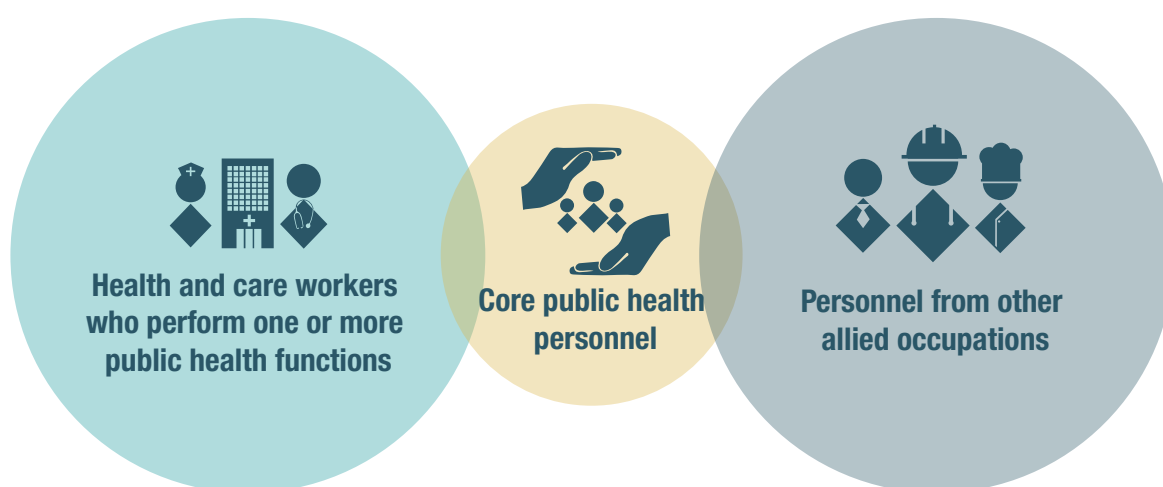
Appendix 2. WHO survey of partners' workforce strengthening activities to deliver the EPHFs

WHO launched a roadmap for strengthening the public health workforce just before the 75th World Health Assembly. Following the first steering committee meeting for the roadmap on 17–19 October 2022, we are conducting a survey of partners to map health workforce strengthening activities and inform next steps in the roadmap and its action areas.

The purpose of this survey is to:

- identify past (within the last five years), ongoing and planned activities, training and technical resources relating to the development of the public health workforce, including the emergency workforce;
- understand the areas of work related to the development of the health workforce that fall under public health (e.g. one or more of the essential public health functions (EPHFs), including health emergencies or health security preparedness, readiness, response and/or recovery); and
- capture technical areas of focus, including resource materials relating to the application of the EPHFs that could inform next steps in the roadmap and its three action areas.

By the public health workforce, we mean the broader workforce that includes those working outside the health sector in the delivery of one or more of the EPHFs, as illustrated in the figure below.



The survey should take approximately 10 minutes to complete.

There are eight questions in this survey, all of which are mandatory.

1

What is the name of your institution or organization and your current role?

2

In which WHO region is your work primarily based?

(For further information on WHO regions, please visit: www.who.int/about/who-we-are/regional-offices)

- African Region
- Region of the Americas
- South-East Asia Region
- European Region
- Eastern Mediterranean Region
- Western Pacific Region
- Global/inter-regional

3

Which of the following EPHFs does your area of work most relate to?

- Monitoring and evaluating the population's health status, health service utilization and surveillance of risk factors and threats to health
- Public health emergency management
- Assuring effective public health governance, regulation and legislation
- Supporting efficient and effective health systems and multisectoral planning, financing and management for population health
- Protecting populations against health threats, including environmental and occupational hazards, communicable disease threats, food safety, and chemical and radiation hazards
- Promoting prevention and early detection of noncommunicable and communicable diseases
- Promoting health and well-being and actions to address the wider determinants of health and inequity
- Ensuring community engagement, participation and social mobilization for health and well-being
- Ensuring adequate quantity and quality of the public health workforce
- Assuring quality of and access to health services
- Advancing public health research
- Ensuring equitable access to and rational use of essential medicines and other health technologies

4

Please share any references to key documents related to your work on the EPHFs in line with those listed in question 3.

5

In reference to question 3, are there any references, resources and/or published or unpublished work that you can share about the health workforce-related activities that your institution or organization has led, been involved in or is expecting to work on? If so, please provide details below.

6

Is your institution or organization involved in the delivery of the EPHFs, including at the subnational level?

- Yes
- No

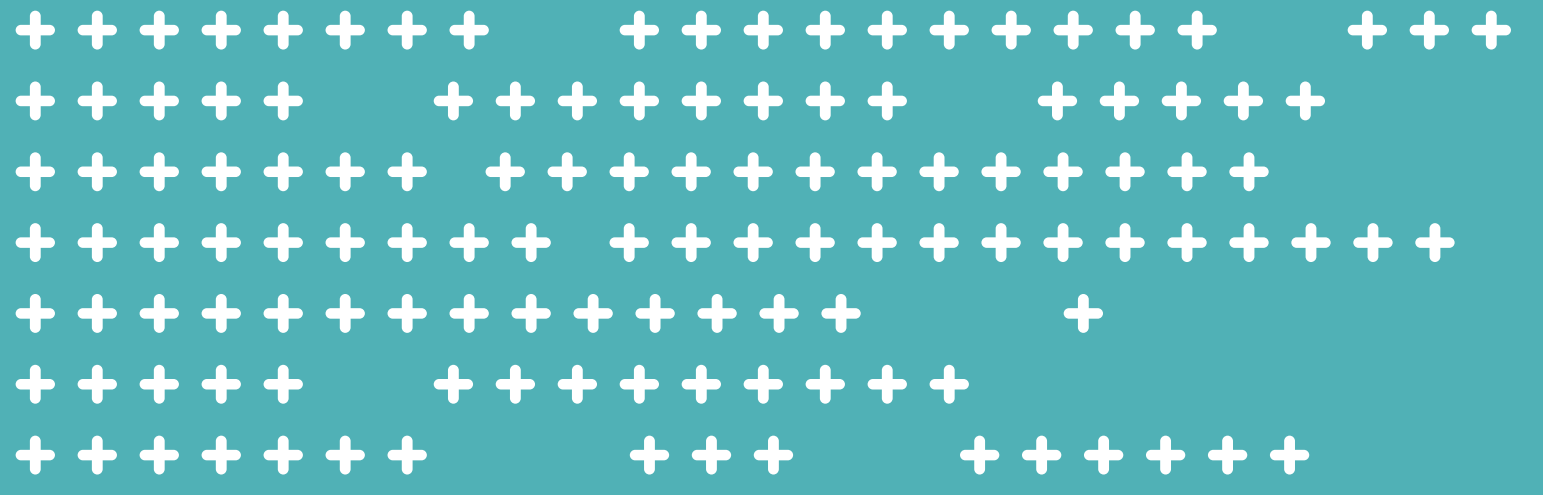
7

If you answered yes to question 6, please provide references of key activities you are involved in.

8

Please recommend a contact person from your institution or organization who we can communicate with if needed (please provide a name, email address and any other relevant information).

End of survey



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