

National Workforce Capacity for Essential Public Health Functions Collection

National workforce capacity for essential public health functions

Operational handbook for country-led
contextualization and implementation

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ISBN 978-92-4-009141-2 (electronic version)

ISBN 978-92-4-009142-9 (print version)

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Suggested citation. National workforce capacity for essential public health functions: operational handbook for country-led contextualization and implementation. Geneva: World Health Organization; 2024. Licence: CC BY-NC-SA 3.0 IGO.

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+ Preface

Achieving and sustaining national progress towards universal health coverage, health security and the health-related Sustainable Development Goals necessitates a workforce that can deliver the full range of both the essential health services and the essential public health functions, including emergency preparedness and response. Whether dealing with the repercussions of the COVID-19 pandemic, preparing for and preventing the next pandemic, or addressing diverse challenges (climate change, the escalating burden of noncommunicable diseases, antimicrobial resistance etc.) there are economic, health and moral imperatives to strengthen the public health workforce.

In May 2022, the World Health Organization (WHO) and partner organizations agreed a roadmap on national workforce capacity to implement the essential public health functions. This roadmap emphasizes three interconnected action areas: defining the essential public health functions, subfunctions and services tailored to the regional, national or subnational context; strengthening competency-based education oriented towards delivering the essential public health functions; and mapping and measuring the diversity of occupations involved in delivering these functions, along with projected needs. Detailed reference tools developed for each action area comprise a unique framework of methodologies, which can be adapted to reflect different contexts, needs and priorities.

Operationalizing the roadmap's three action areas requires the support of a broad coalition of partners and stakeholders with diverse expertise; and collective collaboration and action from governments, funders, technical partners, academic institutions including schools of public health, national public health institutes and civil society organizations.

This handbook is addressed to policy-makers, planners and educators, with the aim of supporting countries to assess their current public health workforce situation, needs and opportunities for progress across the three action areas. A list of questions is provided to guide the benchmarking process, which involves review, assessment, monitoring performance and contextualization, and how to integrate the findings with health workforce, health systems and health security policies and planning.

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. We extend our appreciation and acknowledgment to all partners and individuals involved in producing this document, including the technical leads of each action area and the Public Health and Emergency Workforce Roadmap Steering Committee.

We call upon all countries to use this handbook to stimulate national dialogue and, most importantly, action to build the national workforce capacity needed to deliver the essential public health functions. And we call upon all interested parties to join us in supporting countries in this urgent endeavour.



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+ Acknowledgements

This document is the result of significant technical contributions and the collaborative efforts of the World Health Organization (WHO) Steering Committee on the Public Health and Emergency Workforce Roadmap, coordinated by the WHO core secretariat: Huan Xu, Lizzie Tecson, Khassoum Diallo, Siobhan Fitzpatrick, Catherine Kane, Tapas Sadasivan Nair, Sohel Saikat, Yu Zhang and Wenzhen Zuo, under the overall guidance of Jim Campbell.

The following colleagues provided valuable feedback and enriched the content: from the WHO Health Emergency Team: Scott Dowell, Melinda Frost, Ong-orn Prasarnphanich, Christopher Schmachtel and Stephane de la Rocque Severac; from the Gender, Rights and Equity team: Erin Kenney and Emilie De Grazia; and the WHO health workforce regional focal points: James Asamani (Regional Office for Africa), Benjamin Puertas (Regional Office for the Americas), Ibadhat Dhillon (Regional Office for South-East Asia), Tomas Zapata (Regional Office for Europe), Gulin Gedik (Regional Office for the Eastern Mediterranean) and Masahiro Zakoji (Regional Office for the Western Pacific).

WHO would like to thank the many individuals who contributed to the development of this document, in particular, the action area co-leads, who made substantial contributions and played vital roles in shaping this endeavour: Kipp Bagett (United States Centers for Disease Control and Prevention), Geneviève Chêne (Centre Hospitalier Universitaire de Bordeaux, France); Laura Magaña (Global Network for Academic Public Health), Atiya Mossam (College of Public Health Medicine, Colleges of Medicine of South Africa), Priscilla Robinson (World Federation of Public Health Associations) and George Shakarishvili (Training Programs in Epidemiology and Public Health Interventions Network).

Special appreciation goes to administration and management colleagues from WHO headquarters: Universal Health Coverage, Life Course Division Assistant Director-General's Office and Health Workforce Department.

Lastly, we express our gratitude to the hosts and participants of the Steering Committee meetings, in particular, Health Education England, United Kingdom for hosting the second Steering Committee meeting in London (February 2023) and Istituto Superiore di Sanità, Italy for hosting the third Steering Committee meeting in Rome (July 2023). The insightful deliberations during the meetings led to endorsement of the technical tools and development of this simplified technical package for contextualization and benchmarking at the country level. Participants in the Steering Committee meetings represented the Food and Agriculture Organization of the United Nations, Global Network for Academic Public Health, International Association of National Public Health Institutes, World Federation of Public Health Associations and World Organisation for Animal Health, as well as the following organizations working across all WHO regions.

African Region: Africa Centres for Disease Control and Prevention, Public Health Institutes and Research programme; Association of Schools of Public Health in Africa; College of Public Health Medicine, Colleges of Medicine of South Africa.

Region of the Americas: Association of Schools and Programs of Public Health, USA; Ata Health Strategies LLC, USA; Centers for Disease Control and Prevention, USA; Duke Global Health Institute, Duke University, USA; National Board of Public Health Examiners, USA; Office of Global Affairs, United

States Department of Health and Human Services; Seed Global Health, USA; University of California, Irvine & One Health Workforce, USA.

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Eastern Mediterranean Region: Eastern Mediterranean Public Health Network; International Association of National Public Health Institutes, Asia Network; College of Health Sciences, Qatar University.

Western Pacific Region: Bill & Melinda Gates Foundation, China Office; Chinese Center for Disease Control and Prevention; China Medical Board; La Trobe University, Australia; National Institute of Public Health, Japan; Sunway University, Malaysia; Tsinghua University, Vanke School of Public Health, China; University of Sydney, School of Public Health, Australia; Zhejiang University, School of Public Health, China.

The production of this document has been made possible through funding support from China, Germany and Spain.

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Abbreviations

EPHFs	essential public health functions
HEPR	health emergency prevention, preparedness, response and resilience
ICSO	International Standard Classification of Occupations
IHR	International Health Regulations (2005)
NHWA	National Health Workforce Accounts
PHEWF	public health and emergency workforce
SDGs	Sustainable Development Goals
UHC	universal health coverage
WHO	World Health Organization

+ Executive summary

COVID-19 laid bare the urgent need for every country to develop a critical mass of public health expertise and to ensure that this work is an integral part of multisectoral efforts to improve health and well-being, strengthen health systems and advance health security. Building and maintaining the public health workforce in all countries is key to protecting our future and the future of generations to come, and to realizing the vision of health for all.

In May 2022, the World Health Organization (WHO) – in partnership with associations, institutions and schools of public health, as represented by their respective national, regional and global bodies – launched a five-year initiative set out in *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*.

The policy agenda outlined in the roadmap, and detailed in technical guidance, provides a data-driven and evidence-based pathway that policy-makers, planners and educators in all countries can adapt and use to strengthen national public health workforce capacities. This comprehensive, holistic approach – which covers a broad range of public health workforce interventions and recognizes the specific needs and requirements to reinforce the emergency preparedness and response functions of this workforce – requires country-led contextualization and implementation.

Strengthening the public health workforce

The public health workforce includes all people who contribute to the delivery of at least one of 12 essential public health functions (EPHFs), as part of integrated health system services and functions. This workforce comprises people working in diverse occupations, from health and non-health sectors, and can be conceptually framed as three overlapping groups:

- core public health personnel who work exclusively on the EPHFs;
- health and care workers who spend some of their time delivering the EPHFs as part of their clinical or social care roles; and
- personnel from occupations allied to health who play critical roles in addressing the determinants of health.

Three priority action areas are key to building and managing the workforce needed to deliver the EPHFs, including the surge capacities required to respond to large-scale crises.

Action area 1: Defining the functions and services. Define the EPHFs and associated subfunctions, as well as a consolidated package of public health services and system enablers that represent the full spectrum of public health services and functions required in the country.

Action area 2: Competency-based education. Identify the skills and competencies required to deliver the EPHFs and to strengthen education oriented towards the delivery of the functions and services relevant to scope of practice and context, and with the knowledge, skills, attitudes and competencies for effective work.

Action area 3: Mapping and measurement of occupations. Map and measure the size and profile of the workforce engaged in delivering the functions and services in terms of “stock” (headcount) and share of time by occupation.

WHO and partners have developed reference tools for the three action areas, which are interlinked but not strictly sequential. Collectively, the tools, which each country can adapt to reflect its national context, needs and priorities, provide an opportunity for countries and regional and global bodies to adopt a coherent approach to national public health workforce development and management. This handbook provides an overview of these three technical tools and can serve as a rapid guide to countries in support of the benchmarking process.

Benchmarking the public health workforce: preparation and planning

The first step for a country to determine how best to strengthen its public health workforce is to assess current policies, strategies, plans, programmes and other relevant mechanisms to identify gaps and set priorities across the three action areas described above.

Benchmarking exercises can use available data and other information, including: desk reviews of national health policies strategies and plans; assessments of health system performance and population health needs; monitoring and evaluation for the International Health Regulations (2005); reviews of existing education curricula; and National Health Workforce Accounts data. Countries can rapidly establish baseline public health activities by harnessing the results of existing assessments relating to one or more of the three action areas.

Additional benchmarking preparation and planning activities include: stakeholder analysis and engagement; establishing a national multistakeholder advisory group (or using an existing governance mechanism); identifying opportunities for policy dialogue and country assessment; and deciding on the desired outputs and outcomes of the benchmarking process.

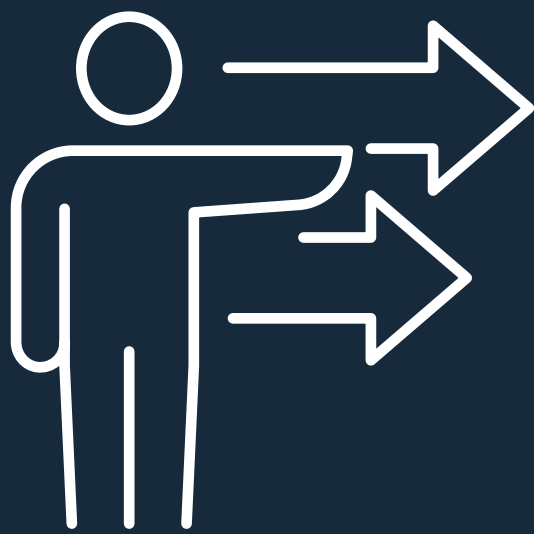
Guiding questions are included in this handbook to help countries better understand their public health workforce needs, define the scope of the benchmarking activities for each action area, and prepare for benchmarking, implementation, monitoring and evaluation.

Linking benchmarking findings to policy and planning

Data and evidence from the benchmarking exercises can be used to set the baseline for current national capacities relating to the public health workforce. This information can be used to develop a national strategy to build and maintain the public health workforce, guide implementation monitoring, and inform other relevant policy and planning processes in the country.

An overall national strategy can ensure alignment and coherence of the changes required in each of the three action areas. Progress in the three action areas in tandem will strengthen the public health workforce, putting countries in a stronger position to meet population health needs, address current and future public health emergencies, and accelerate progress towards universal health coverage and health security.





1. Introduction

+ 1. Introduction

The COVID-19 pandemic tested the capacity of health systems globally. Every country, regardless of sociopolitical and economic context, was challenged to respond to emergent pandemic requirements, alongside maintaining essential health services, and against the background of persistent underinvestment in public health capacity and a global health workforce shortfall. Requirements arose both to add workers and to expand the understanding of what types of workers and tasks are needed to deliver public health functions and services, including emergency preparedness and response.

**The
COVID-19
pandemic
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capacity
of health
systems
globally**

While these capacity, investment and response limitations and challenges are not new, COVID-19 shone a spotlight on the need for every country to address them holistically and strategically, not only to be better prepared for the next pandemic but also to tackle current threats to health, such as climate change, humanitarian crises, poverty, gender inequalities and an increasingly complex burden of disease. Although each country will have its own priorities, the public health workforce represents a foundational component of all efforts to increase health system resilience and of all policies, plans and strategies concerning health security, universal health coverage (UHC) and the health-related Sustainable Development Goals (SDGs).

The urgent need for action to strengthen the public health workforce was recognized in declarations of the G7 in 2022 and 2023 (1) and the G20 in 2021 (2,3) and in a series of World Health Assembly resolutions (4–7). In response, the World Health Organization (WHO) – in partnership with associations, institutions and schools of public health, as represented by their respective national, regional and global bodies – launched a five-year initiative set out in *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* (hereafter “PHEWF roadmap”) in May 2022 (8) and its Action Plan (2022–2024) in October 2022 (9).

The policy agenda outlined in the PHEWF roadmap provides a data-driven and evidence-based pathway that all countries can use to strengthen their public health workforce. The reference tools developed by WHO and partners comprise a unique framework of methodologies for public health capacity strengthening. Collectively, the tools, which each country can adapt to reflect its national context, needs and priorities, provide an opportunity for countries and regional and global bodies to adopt a coherent approach to national public health workforce development and management.

About this handbook

This document briefly describes the broader context and other processes relating to global health security, health systems and the health workforce, and presents an overview of the PHEWF roadmap, its added value and its three priority action areas: (1) essential public health functions and services, (2) competency-based education, and (3) mapping and measurement of occupations. It also introduces the detailed technical reference documents developed for each action area. The document is addressed to policy-makers, planners and educators, with the aim of supporting countries to benchmark themselves and assess their current public health workforce situation, needs and opportunities for progress. A list of questions is provided to guide the benchmarking process,¹ including how to integrate the findings with health workforce, health systems and health security policies and planning.

The time for action is now. COVID-19 laid bare the urgent need for every country to develop a critical mass of public health expertise and to ensure that this work is an integral part of multisectoral efforts to improve health and well-being, strengthen health systems and advance health security. Building, maintaining and strengthening the public health workforce in all countries is key to protecting our future and the future of generations to come, and to realizing the vision of health for all.

It is envisaged that this work can develop a critical mass of readily available public health expertise, workforce and networks within and beyond ministries of health

¹ The benchmarking process involves review, assessment, monitoring performance and contextualization.



2. Broader context

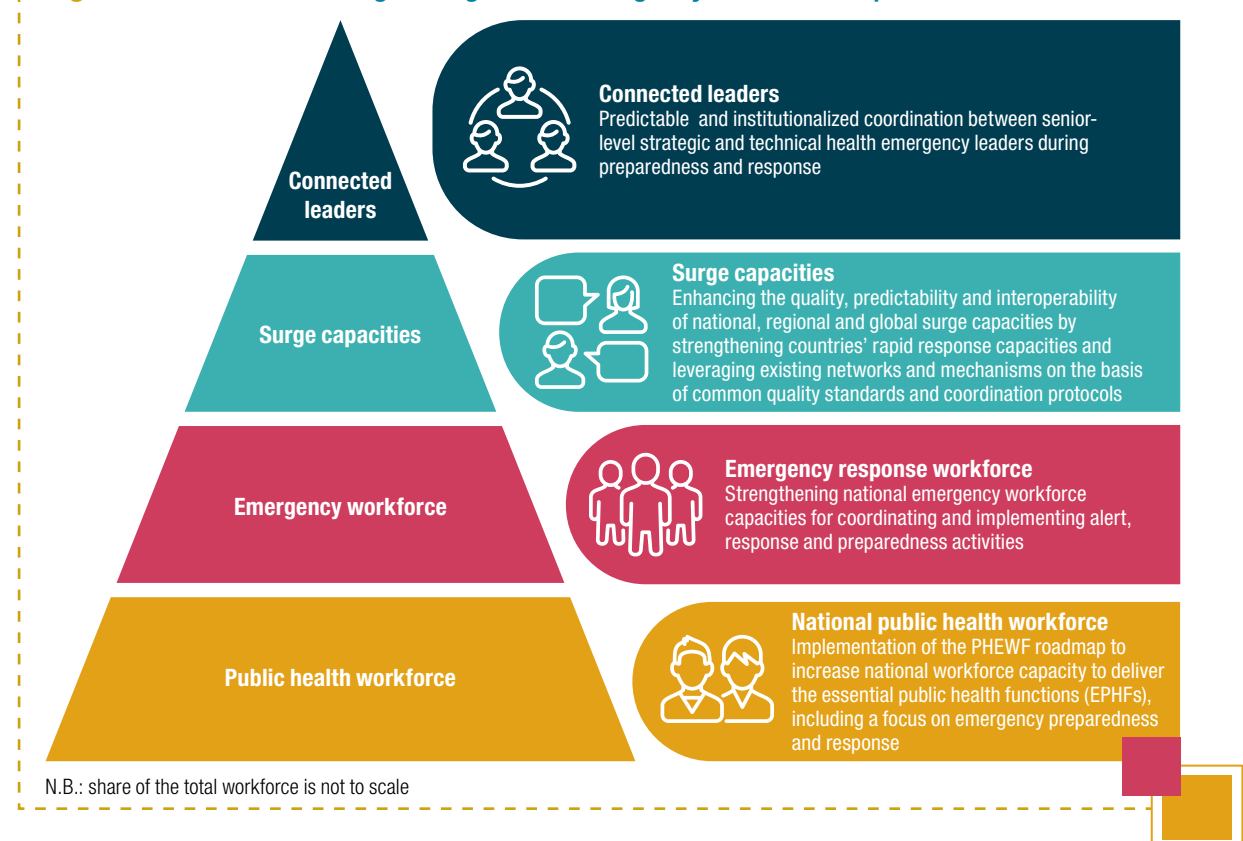
+ 2. Broader context

All Member States have the responsibility to build and maintain effective and functioning capacities and systems to prevent, detect, protect against, control and provide a public health response to public health emergencies and to comply with relevant international treaties or agreements, including the International Health Regulations (2005) (IHR) (10) and the emerging WHO Pandemic Agreement (11).

In the wake of the COVID-19 pandemic, countries around the world are striving to strengthen health systems and bolstering public health capacities. The health workforce, disease surveillance and early warning, and laboratory systems are the three priority focus areas of the World Bank Pandemic Fund's initial round of funding, which allocated more than US\$ 300 million in 37 countries across its six geographic regions, with an additional US\$ 500 million waiting to be allocated (12). Fig. 1 illustrates how building national public health workforce capacities is pivotal to the global architecture for health emergency prevention, preparedness, response and resilience (HEPR) (13).

In the wake of the COVID-19 pandemic, countries around the world are striving to strengthen health systems and bolstering public health capacities

■ Fig. 1. HEPR vision of strengthening health emergency workforce capacities



The approach recommended in the PHEWF roadmap and related resources, including this handbook, fully aligns with the HEPR architecture. It provides guidance for interventions to strengthen public health workforce capacities while recognizing that there are specific needs and requirements for strengthening the emergency preparedness and response functions of this workforce. Examples include:

- accelerating the development, implementation and monitoring of a National Action Plan for Health Security (14);
- engaging in the Universal Health and Preparedness Review, “a voluntary, transparent, Member State-led peer review mechanism, that aims to establish a regular intergovernmental dialogue between Member States on their respective national capacities for health emergency preparedness” (15);
- investing in public health surveillance;
- preparing for and adapting to the health impacts of climate change;
- planning and staffing national public health institutes and regional centres for disease control and prevention; and
- adopting the “One Health” approach (16) to prevent and tackle major threats affecting the health and well-being of humans, animals, plants and the environment, including by enabling veterinarians, doctors, epidemiologists, public health practitioners, wildlife experts, community leaders and people from different sectors to work together.

It is vital that efforts to strengthen the public health and emergency workforce are aligned and integrated with broader health workforce issues

Efforts to strengthen the public health workforce must be aligned with, and embedded in, existing national health policies, strategies and plans, as well as national health security processes and the broader agenda to achieve the health-related SDG targets, including for gender equality. For example, including the public health workforce in health labour market analyses will improve understanding of the factors shaping the demand for and supply of this diverse multidisciplinary workforce within the context of the overall health and care workforce (17). These factors include the private sector and the gendered dimensions of the health labour market.

Table 1 lists WHO normative guidance and other resources on various workforce issues (governance, planning, intersectoral coordination, education, budgeting and remuneration, retention, regulation, gender, etc.), which countries may find helpful when deciding how to mainstream the public health workforce into broader national workforce issues.

■ **Table 1. WHO health workforce resources**

Resource	Description	URL
Global strategy on human resources for health: Workforce 2030	The development of this global strategy was informed by a process launched in late 2013 by Member States and constituencies. Over 200 experts from all WHO regions contributed to consolidating the evidence around a comprehensive health labour market framework for UHC.	https://www.who.int/publications/i/item/9789241511131
Health labour market analysis guidebook	This guidebook provides a comprehensive overview of the health labour market, offers guidance on how to analyse and understand its dynamics and identifies key steps to undertake a health labour market analysis, including key steps for a gender analysis.	https://www.who.int/publications/i/item/9789240035546
National Health Workforce Accounts (NHWA) – Handbook (second edition) – Implementation guide	NHWA is a system by which countries progressively improve the availability, quality and use of health workforce data through monitoring of a set of indicators to support the achievement of UHC, the SDGs and other health objectives.	https://www.who.int/publications/i/item/9789240081291 https://www.who.int/publications/i/item/9789241514446
Working for Health 2022–2030 Action Plan: planning and financing	This brief aims to inform Member States, non-state actors and other stakeholders vested in implementing the Working for Health 2022–2030 Action Plan to consider the context of planning and financing for the health and care workforce, including the relevant policy landscape, key challenges and future directions.	https://www.who.int/publications/i/item/9789240063389
Global health and care workers compact	This compact sets out complementary management and policy actions structured around four domains: preventing harm; providing support; inclusivity; and safeguarding rights.	https://www.who.int/publications/m/item/carecompact
The WHO Global Code of Practice on the International Recruitment of Health Personnel	The code of practice is intended to be a core component of bilateral, national, regional and global responses to the challenges of health personnel migration and health systems strengthening.	https://www.who.int/publications/i/item/wha68.32
The gender pay gap in the health and care sector: a global analysis in the time of COVID-19	Co-developed by the International Labour Organization and WHO, this report analyses the gender pay gaps in the health and care sector. Achieving equal pay for equal work across the sector is a critical step to attracting workers to jobs in health and care and improving retention rates.	https://www.who.int/publications/i/item/9789240052895
WHO guideline on health workforce development, attraction, recruitment and retention in rural and remote areas	In 2021, WHO updated the guideline <i>Increasing access to health workers in remote and rural areas through improved retention: global policy recommendations</i> (2010). Securing equitable access to health services for rural and remote populations continues to be a challenge for governments and policy-makers around the world.	https://www.who.int/publications/i/item/9789240024229
Working for health and growth: investing in the health workforce. Report of the High-Level Commission on Health Employment and Economic Growth	In 2016, the High-Level Commission on Health Employment and Economic Growth made 10 recommendations to stimulate and guide the creation of at least 40 million new jobs in the health and social sectors, and to reduce the projected shortfall of 18 million health workers, primarily in low- and lower-middle income countries, by 2030.	https://www.who.int/publications/i/item/9789241511308



3. Strengthening the public health workforce: key issues

+ 3. Strengthening the public health workforce: key issues

The performance of 12 essential public health functions (EPHFs), described in Box 1, including emergency preparedness and response, is dependent on a strengthened public health workforce in every country.

Box 1. A unified list of 12 EPHFs

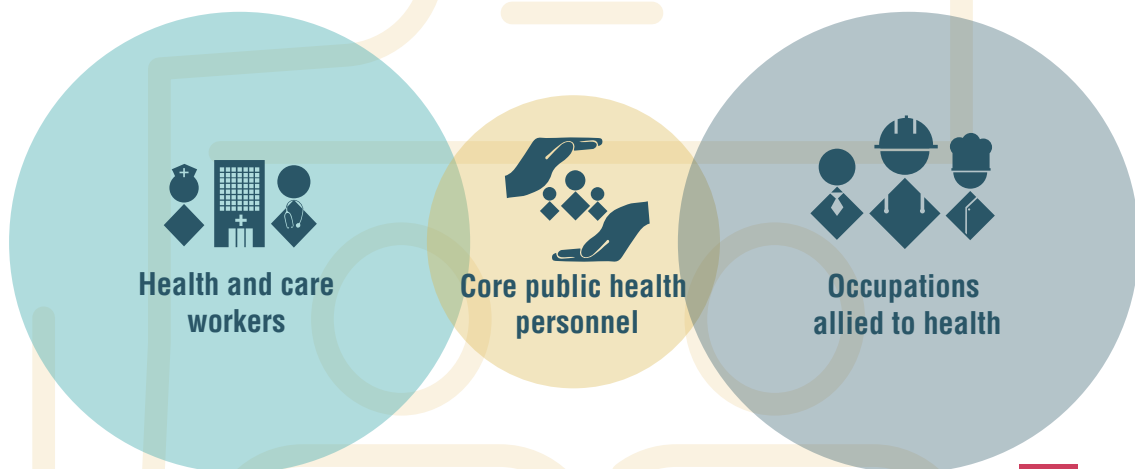
- **Public health surveillance and monitoring:** monitoring and surveillance of population health status, risks, protective and promotive factors, threats to health, and health system performance and service utilization.
- **Public health emergency management:** managing public health emergencies for 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 noncommunicable 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 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: 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.

The public health workforce includes all people who contribute to the delivery of at least one of the EPHFs as part of integrated health system services and functions. This workforce comprises people working in diverse occupations, from health and non-health sectors, and can be conceptually framed as three overlapping groups (see Fig. 2).

- 1 **Core public health personnel** who work exclusively on the EPHFs. They may have undergone specialized professional training or be registered with professional bodies in public health, with either a health or a non-health background. Their work may either contribute to multiple EPHFs or be specialized for a particular EPHF.
- 2 **Health and care workers** who spend some of their time in delivering the EPHFs while performing their usual clinical or social care tasks.
- 3 Personnel from **occupations allied to health** who play critical roles outside of the health sector in addressing the determinants of health, such as those engaged in water and sanitation, food supply chains and road safety.

■ Fig. 2. Composition of the workforce that delivers the EPHFs



Source: adapted from (8).

The added value of a renewed focus on the public health workforce

Return on investment. Building an integrated, multidisciplinary and multisectoral public health workforce that can deliver the EPHFs, including emergency preparedness and response, will produce a return on investment. For example, the Lancet Commission on Investing in Health estimated the return on investment in health to be nine to one (18). The public health workforce is key to meeting challenges such as those caused by COVID-19, enabling the world to better prevent, prepare for, respond to and

recover from future pandemics as well as other public health challenges, while providing and maintaining essential services and functions, and mitigating broader socioeconomic disruption. Investing in the public health workforce will also facilitate women's and young people's participation in the labour market and contribute to their social and economic empowerment.

Sustainable workforce strengthening. Using the EPHFs as a lens through which to invest in public health workforce strengthening can develop a workforce with the skills and competencies, as well as the broader systems inputs, needed to withstand future emergencies and public health crises. Approaching the EPHFs through diverse perspectives and a One Health approach facilitates their management in a more integrated manner. Development of the public health workforce should be in line with national planning, capacities and institutional models, and current and anticipated population health needs, including pandemic preparedness and response.

Multistakeholder collaboration. Multidisciplinary partnership networks offer a unique opportunity for policy-makers at the country level to join forces with regional and global bodies and adopt a coherent approach to the development, management and professionalization of this critically needed category of workers. The diverse country representatives of the partnership networks can accelerate the establishment of national stakeholder working groups that can contribute to national resource mobilization and consultation through all phases of this project.

Global peer-to-peer support and development of new global public goods. Joint efforts by leading public health and emergency preparedness, response and resilience experts, organizations and associations can result in the sharing of strategic intelligence, identification of good practices and development of new context-adapted policy guidance. Such a partnership model, with South-South and South-North cooperation, will enable enhanced alignment and coordination in support of country efforts to strengthen workforce capacity, as well as capturing lessons learned and best practices. This knowledge will inform global public health workforce development and generate global public health goods for the benefit of all.

The action areas are interlinked and not strictly sequential, and can be adapted to existing national policies, plans, investments and capacity needs

Three action areas to deliver the EPHFs

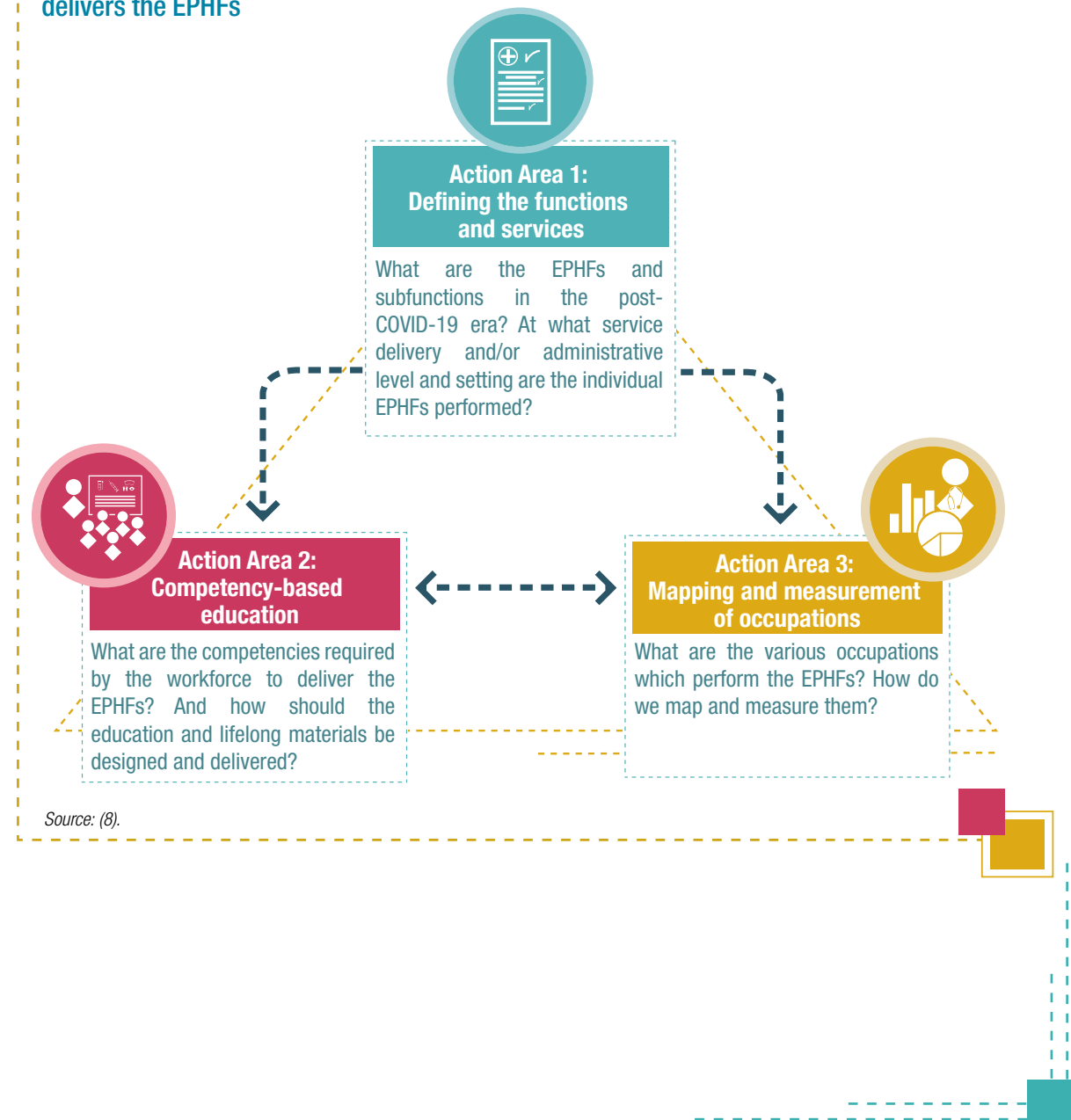
To support countries in strengthening their public health workforce, or any of their priority EPHFs (for example, building capacities in public health surveillance or public health emergency management), three priority action areas are described below and highlighted in Fig. 3.

1. Define the EPHFs and associated subfunctions, as well as a consolidated package of public health services and system enablers that represent the full spectrum of public health services and functions required in the country.

2. Identify the skills and competencies required to deliver the EPHFs and to strengthen education oriented towards the delivery of the functions and services relevant to scope of practice and context, and with the knowledge, skills, attitudes and competencies for effective work.
3. Map and measure the size and profile of the workforce engaged in delivering these functions and services in terms of “stock” (headcount) and share of time by occupation.

The action areas are interlinked but not strictly sequential, so they can be adapted to existing national policies, plans, investments and capacity needs.

Fig. 3. Conceptual approach to scoping, defining and building capacity of the workforce that delivers the EPHFs





4. Operationalizing the three action areas: technical guidance and tools

+ 4. Operationalizing the three action areas: technical guidance and tools



Action area 1. Defining the functions and services

The 12 EPHFs are a set of fundamental, interconnected and interdependent functions, both within and beyond the health sector, that are required to ensure effective public health action to promote and protect health and well-being, prevent disease and address broad determinants of health. Individual functions can be characterized as those that are service delivery focused and those that enable the delivery of population-based health services (see Fig. 4).

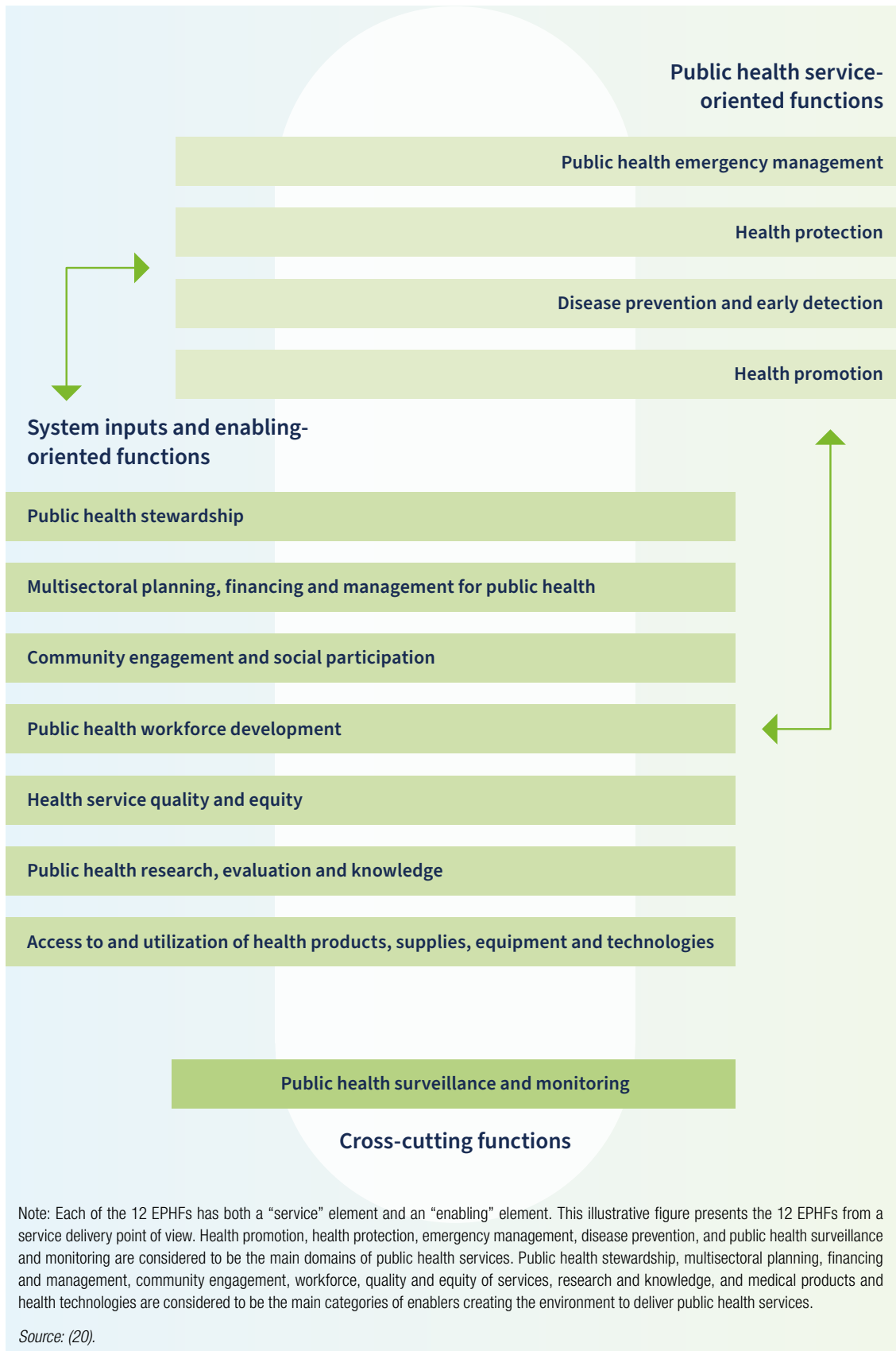
Strengthening public health workforce capacity: [defining the essential public health functions and services \(19\)](#) summarizes the technical details and approaches presented in [Application of the essential public health functions: an integrated and comprehensive approach to public health \(20\)](#). The technical package includes a range of flexible and adaptable tools to support countries and partners in operationalizing the EPHFs. It first provides an overview of the EPHFs, including the theory of change for investing in them, and how a primary health care approach that incorporates the EPHFs is the most cost-effective way to strengthen health systems and accelerate progress towards UHC, health security and healthier populations.

The technical package also includes technical resources relating to subfunctions, public health services and system enablers. The subfunctions describe the operational scope of each EPHF to support countries in identifying all the actions and capacities needed to operationalize the EPHFs in national policy and planning. A streamlined list of 20 public health services and 12 system enablers represents the full depth and breadth of public health captured within the 12 EPHFs and provides a service-based approach to operationalizing the EPHFs in a national context.

The third part of the technical package focuses on applying the EPHFs, providing a step-by-step approach that is fully adaptable to country contexts. Examples include: identifying strengths and gaps in public health capacities and stewardship to inform policy and planning; strengthening institutional structures and workforce capacity for delivering the EPHFs; and defining a comprehensive package of public health services in a national context.

A strategic review of public health stewardship and capacities informed by the EPHFs is recommended as the first step towards implementation. The review would examine the EPHFs across a number of areas, including policy and planning, inputs and infrastructure, service delivery, integration and coordination, learning mechanisms, and monitoring and evaluation. The workforce to deliver the EPHFs is a key component, as are other health system inputs. This thematic approach enables countries to understand their baseline capacities for delivering the EPHFs in a comprehensive and rapid manner. Gaps and areas for strengthening or development identified during the review can inform policy and planning. The strategic review can provide the overall public health context to help set the foundation for the PHEWF roadmap's two other action areas.

■ **Fig. 4. EPHFs by service-oriented, enabling-oriented and cross-cutting functions**





Action area 2. Competency-based education

Competency-based education can effectively prepare the workforce for public health practice and emergency management, including people devoted entirely or partly to delivering the EPHFs. It is a whole-of-education programme approach that includes: competency-based outcomes oriented to the practice activities for the EPHFs that meet health needs; progressive sequencing of learning; learning experiences tailored to competency-based outcomes; teaching tailored to competency-based outcomes; and programmatic assessment of the achievement of learning.

Competencies are a person's abilities to integrate knowledge, skills and attitudes in their performance of tasks. Where task lists and practice activities are useful for workforce planning, the performance of tasks and practice activities requires public health and emergency workers with the requisite competencies, such as decision-making, effective communication and collaboration, to do so. It is thus essential that education programmes are oriented to a holistic approach to competence encompassing both the practice activities to be performed in practice and the competencies to do so.

The [*Global competency and outcomes framework for the essential public health functions*](#) (21) brings together and builds on existing frameworks and resources and uses a common conceptual approach to guide institutions, faculty and education planners to strengthen education programmes towards the practice activities for the EPHFs. It aims to guide a consistent and concerted effort to align education programmes with employment throughout the lifelong learning continuum (pre-service, in-service and specialization education) towards the delivery of the EPHFs.

The framework identifies 20 interrelated competencies essential for effective public health practice, organized around six domains: community-centredness, decision-making, communication, collaboration, evidence-informed practice and personal conduct. The behaviours that demonstrate these competencies are elaborated both for the whole workforce as well as leadership behaviours, forming a theoretical framework for describing good practice rooted in the values of public health.

The framework further defines practice activities that operationalize the EPHFs, encompassing the breadth of the public health workforce. It provides a modular, foundational tool to adapt and adopt and to guide the strengthening of competency-based education approaches, linking practice activities towards the EPHFs with the competencies needed to deliver them.

The framework can be used to strengthen existing education programmes, or create new programmes as needed. Transitioning to a fully competency-based education programme may entail either a complete curriculum redesign for a multi-year programme or incremental revisions to a subset of modules. It may also require revising regulatory standards either for occupational groups or for the education programme providers.

Public health and academic institutions are key stakeholders in promoting the framework's uptake and implementation to inform education programmes. It can also be used by employers, regulators and workforce planners to define competency-based performance requirements for public health practice and to inform staffing needs; and it can be used by individuals to assess their own competence and guide continuing education needs.



Action area 3.

Mapping and measurement of occupations

Mapping and measurement of occupations is the process by which countries can: identify the various personnel (their job titles and occupations) who deliver the EPHFs; map their national job titles with the occupational groups listed in International Labour Organization's International Standard Classification of Occupations (22) (ISCO); map the EPHFs and subfunctions being performed by the personnel of respective occupations; and measure the size of occupations engaged in delivering the EPHFs (in terms of headcount or "stock") and their workload engagement (in terms of share of time or full-time equivalents).

The reference tool [Essential public health functions: a guide to map and measure national workforce capacity](#) (23) provides a standardized approach that countries can adopt and adapt to comprehensively map and measure the key occupations involved in delivering the EPHFs. The guidance aims to enable countries to:

- identify the EPHFs and related subfunctions and services that are being delivered by the three workforce groupings (core public health personnel, health and care workers, and personnel from occupations allied to health);
- assess the stock of key occupations in the national workforce that contribute to the delivery of the EPHFs; and
- benchmark themselves and develop action plans to address gaps identified in their workforce capacity.

This approach to mapping and measurement consists of four broad phases as outlined in Fig. 5.

Countries are encouraged to use this standardized measurement approach to understand the size and profile of their public health workforce, map their job titles with the ISCO occupational groups, and monitor the workforce periodically in terms of both headcount (stock) and the actual time spent in delivering the EPHFs (full-time equivalents).

The data obtained from mapping and measuring their public health workforce can be used to identify gaps in national workforce capacity and propose strategies to address their training needs, inform evidence-based planning and policy-making to better manage the workforce, and create projections for future needs. Countries can also use the data to complete the human resources capacity sections of the Joint External Evaluation tool and the State Party Self-Assessment Annual Reporting tool, as well as to develop/update national action plans for health security, national public health strategies and national human resources for health strategic plans.

The framework identifies 20 interrelated competencies essential for effective public health practice



5. Benchmarking the public health workforce: preparation and planning

+ 5. Benchmarking the public health workforce: preparation and planning

The first step for a country to determine how best to strengthen its public health workforce is to assess current policies, strategies, plans, programmes and other relevant mechanisms to identify gaps and set priorities across the three action areas described above.

Benchmarking exercises can use available data and other information, such as: desk reviews of national health policies strategies and plans; assessments of health system performance and population health needs; IHR monitoring and evaluation; public health programme evaluations; reviews of existing education curricula; NHWA data; and health labour market analyses (if previously conducted). Countries can rapidly establish baseline public health activities by harnessing the results of existing assessments relating to one or more of the three action areas.

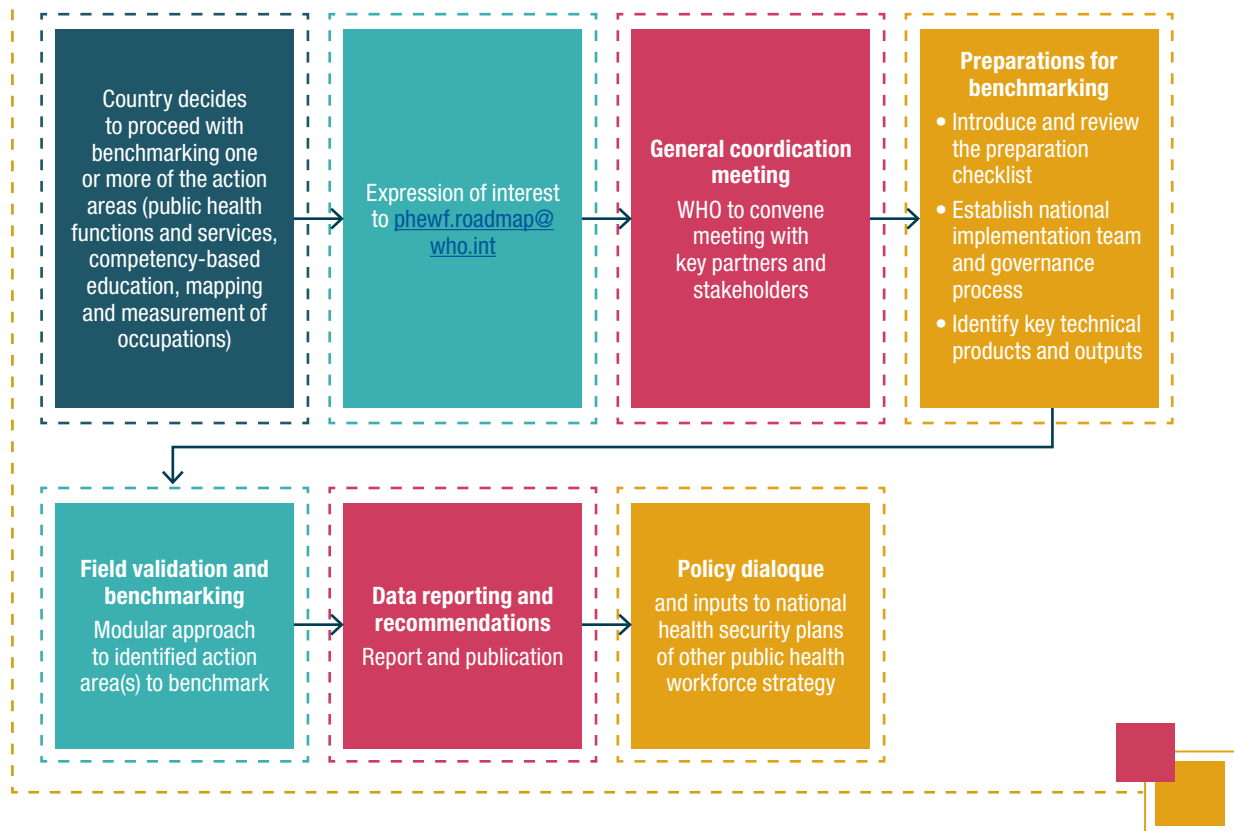
Additional benchmarking preparation and planning activities include:

- stakeholder analysis and engagement, and establishing a national governance mechanism in the form of a national multistakeholder advisory group (or using an existing governance mechanism);
- identifying opportunities for policy dialogue and country assessment; and
- deciding on the desired outputs and outcomes of the benchmarking process.

Partners and stakeholders active in the public health workforce policy domain at national and international level can provide technical support throughout the benchmarking process. An overview of the process, which can be adapted according to the country's perspective, is set out in Fig. 6.



Fig. 6. From expression of interest to benchmarking of national public health workforce capacities



The checklist for preparation and planning

The questions below have been designed to help countries better understand their public health workforce needs, prepare for benchmarking, implementation, monitoring and evaluation, and define the scope of the benchmarking activities for each of the PHEWF roadmap's three action areas.

Public health status baseline

- 1 To what extent is public health prioritized in the government's efforts to strengthen the health system?
- 2 Is there a government agency or institution responsible for public health?
- 3 What are the main needs, gaps and opportunities for progress in public health in your country in terms of institutions, services, workforce and education?
- 4 Is there a national public health workforce plan and/or a national health security plan incorporating public health capacity strengthening?

Preparation and planning phase

General considerations

- Has a stakeholder mapping exercise been done to build a national implementation team? Were potential members identified after multistakeholder analysis and sensitization?
- Has the national implementation team been convened? Do members represent all stakeholder groups and all relevant sectors? What is its governance structure?
- Have the governance procedures and project plan been established?
- Has the case for change been made and the necessary financial, political and regulatory support for strengthening the public health workforce been secured?
- Has the range of internal and external information sources to inform the process been identified?
- Are plans in place to have sufficient staff to support efforts to strengthen the public health workforce, including the benchmarking activities?
- Has a gender analysis been conducted? Has an adolescent health services barriers assessment been conducted (24)?
- Are the results of these analyses and social participation platforms being used to inform decisions and actions?

Monitoring and evaluations, including reporting

- How will the results (outputs and outcomes) of the benchmarking exercises be reported?
- How will the information and insights from the benchmarking process be used to develop evidence-informed policies and plans to strengthen the public health workforce?
- Have the monitoring and evaluation metrics been developed (including timeline, budget/resources, faculty training, training pathways) and appropriate metrics identified to assess progress?
- Will insights from monitoring and evaluation be used to inform periodic reviews and enable continuous quality improvement?

Defining the scope of the benchmarking exercises

Please consider the following questions and highlight the ones that you would like to answer via the benchmarking activities. The technical guidance documents summarized in Chapter 4 provide more in-depth guidance.



Action area 1: defining the functions and services

Understanding the current state of EPHFs

- What is the current model of public health operationalization in the country?
- Which EPHFs have been implemented? How and to what extent?
- Are there gaps in the current list provided?
- How are the EPHFs that are being delivered prioritized?

Understanding the overall state of public health services

- Which of the public health services listed in EPHF technical guidance document are currently being delivered by the government?
- How are the public health services that are being delivered prioritized?
- In which setting (e.g. national, subnational or local government; urban or rural; public or private sector; tertiary, secondary or primary care; health or an allied sector; etc.) are public health services provided? Is there equitable access to these services? Are they equitably distributed across the country? Is equal importance given to promoting and tracking availability, accessibility, acceptability and quality?
- How are disease prevention and health promotion and protection services incorporated into service delivery at all levels, in routine and emergency contexts?

Understanding the key inputs, processes and structures for delivering the EPHFs

- What key policies, strategies and legislative frameworks relate to the EPHFs and to what extent have they been implemented effectively?
- Do health sector policies and plans (e.g. public health act, national health strategy, etc.) consider and promote the integration of the EPHFs? How is this achieved?
- Is there an authority/institutional arrangement that coordinates the planning and delivery of some or all the EPHFs? Is there flexibility when needs change (e.g. during emergencies)?
- What are the roles of subnational and local government authorities and different sectors in implementing the EPHFs (where relevant)? What structures and processes are in place to facilitate intersectoral collaboration?
- What is the role of primary care in delivering the EPHFs and public health services?
- What financial resources and mechanisms are available for the implementation of EPHFs, including for the development of the public health workforce?



Action area 2: competency-based education

Preparations for benchmarking competency-based education

- Has it been decided which programmes/initiatives/projects are going to be prioritized?
- Have their goals, objectives, vision, context and scope been defined?
- Have the national education, local institution and local organizational regulatory requirements?

Defining/revising education programme outcomes or practice standards for employment

- What are the specific expectations for individuals in terms of their role responsibilities (practice activities and competency-based performance standards), and are there local registration requirements?
- What competencies, knowledge, skills, attitudes and values will individuals need to provide the practice activities for the context?
- Are the programme outcomes/practice standards accepted by stakeholders?
- Are the programme outcomes/practice standards aligned with regulatory requirements, occupational scopes of practice and the EPHFs?

Developing/revising the curriculum

- What are the problems and strengths of the current curriculum (learning activities, assessment formats and approaches, educational approaches, educational design and delivery and available expertise)?
- What are the different elements of the curriculum and how do they relate to the programme outcomes?
- Has a programme blueprint for learning activities, assessment and programme outcomes been established?



Action area 3: mapping and measurement of occupations

Mapping of occupations

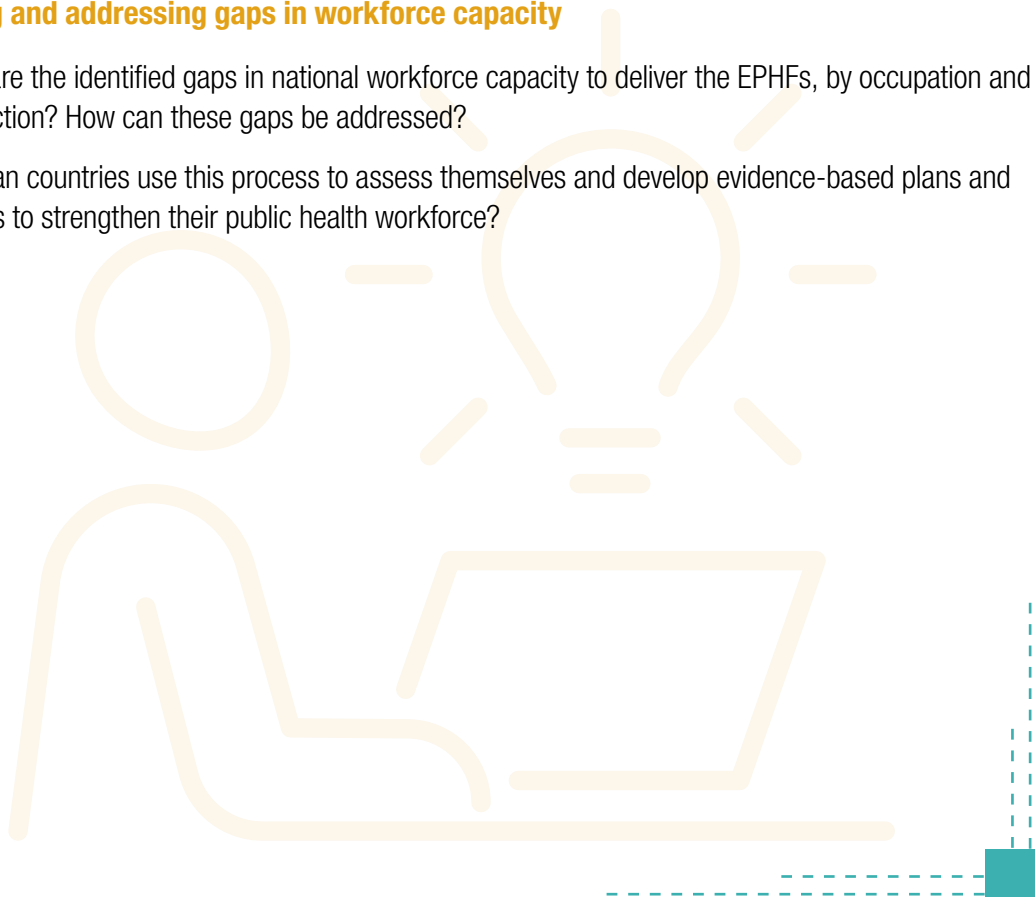
- What are the key occupations in the three workforce groups (core public health personnel, health and care workers, occupations allied to health) that contribute to the delivery of the EPHFs?
- Are national job titles aligned to the International Labour Organization's ISCO?
- Which occupations contribute to the delivery of which functions/subfunctions/services?

Measuring the workforce involved in the delivery of the EPHFs

- What is the size and profile of the national workforce that contributes to the delivery of the EPHFs?
- How is this workforce distributed – by sex, gender, age and geographic location (at subnational level), as well as by economic status, ethnicity and education level?
- What is the share of time spent by these occupations in delivering the EPHFs?

Identifying and addressing gaps in workforce capacity

- What are the identified gaps in national workforce capacity to deliver the EPHFs, by occupation and by function? How can these gaps be addressed?
- How can countries use this process to assess themselves and develop evidence-based plans and policies to strengthen their public health workforce?





6. Linking benchmarking findings to policy and planning

+ 6. Linking benchmarking findings to policy and planning

Data and evidence from the benchmarking exercises can be used to set the baseline for current national capacities relating to the public health workforce. This information can be used to develop a gender-responsive national strategy to build and maintain the public health workforce, guide implementation monitoring and inform other relevant ongoing policy and planning processes in the country (see Chapter 2 for examples).

Benchmarking is the first of three steps towards strengthening the public health workforce (see Table 2).

■ **Table 2. Progression matrix for countries to strengthen the public health workforce**

	Action area 1: Defining the functions and services	Action area 2: Competency-based education	Action area 3: Mapping and measurement of occupations
STEP 1 - BENCHMARKING	Based on the global list of 12 EPHFs, countries ascertain their current state of EPHF delivery in health and allied sectors.	Countries establish competency-based standards for the performance of the tasks and subfunctions of the EPHFs that meet their population health needs, which are used as the competency-based education outcomes.	Countries identify the health and non-health occupations contributing to the delivery of at least one of the EPHFs, map these occupations to national and international standards of classification, and initiate measurement of the workforce size.
STEP 2 - IMPROVEMENT	Countries prioritize EPHFs and subfunctions based on context and public health objectives, which can be informed by population health needs assessment and relevant public health data.	Countries (re)design curricula according to the competency-based education outcomes aligned with competency-based performance standards.	Countries conduct annual data collection on the workforce that delivers the EPHFs and progressively incorporate this reporting into their national health information systems and NHWA.
STEP 3 - FULL IMPLEMENTATION	Countries deliver the prioritized EPHFs and subfunctions at national and subnational levels and integrate EPHFs into health workforce planning as well as health and allied sectors' planning.	Countries implement competency-based standards for employment, performance assessment and identification of training needs, which are aligned with competency-based education outcomes for pre-service and in-service training for the provision of EPHFs.	Countries use these data to inform their public health (including emergency) workforce plans and policies, create projections and model for future needs, and continue to routinely report in NHWA.

Source: adapted from (8).

An overall national strategy can ensure alignment and coherence of the changes required in each of the three action areas. Other considerations include:

- beginning the process of securing the necessary regulatory approvals (e.g. accreditation standards);
- establishing the roles and responsibilities of different stakeholders;
- securing the necessary resources for implementing the required changes;
- establishing processes for the coordination, monitoring and facilitation of implementation; and
- continuing to engage with and enable stakeholders to take the actions required to fully implement the EPHFs, strengthen competency-based education to deliver the EPHFs, and improve the measurement of the workforce that delivers the EPHFs.

An overall national strategy can ensure alignment and coherence of the changes required in each of the three action areas

Progress in the three action areas in tandem will strengthen the public health workforce, putting countries in a stronger position to meet population health needs, address current and future public health emergencies, and accelerate progress towards UHC and health security.



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