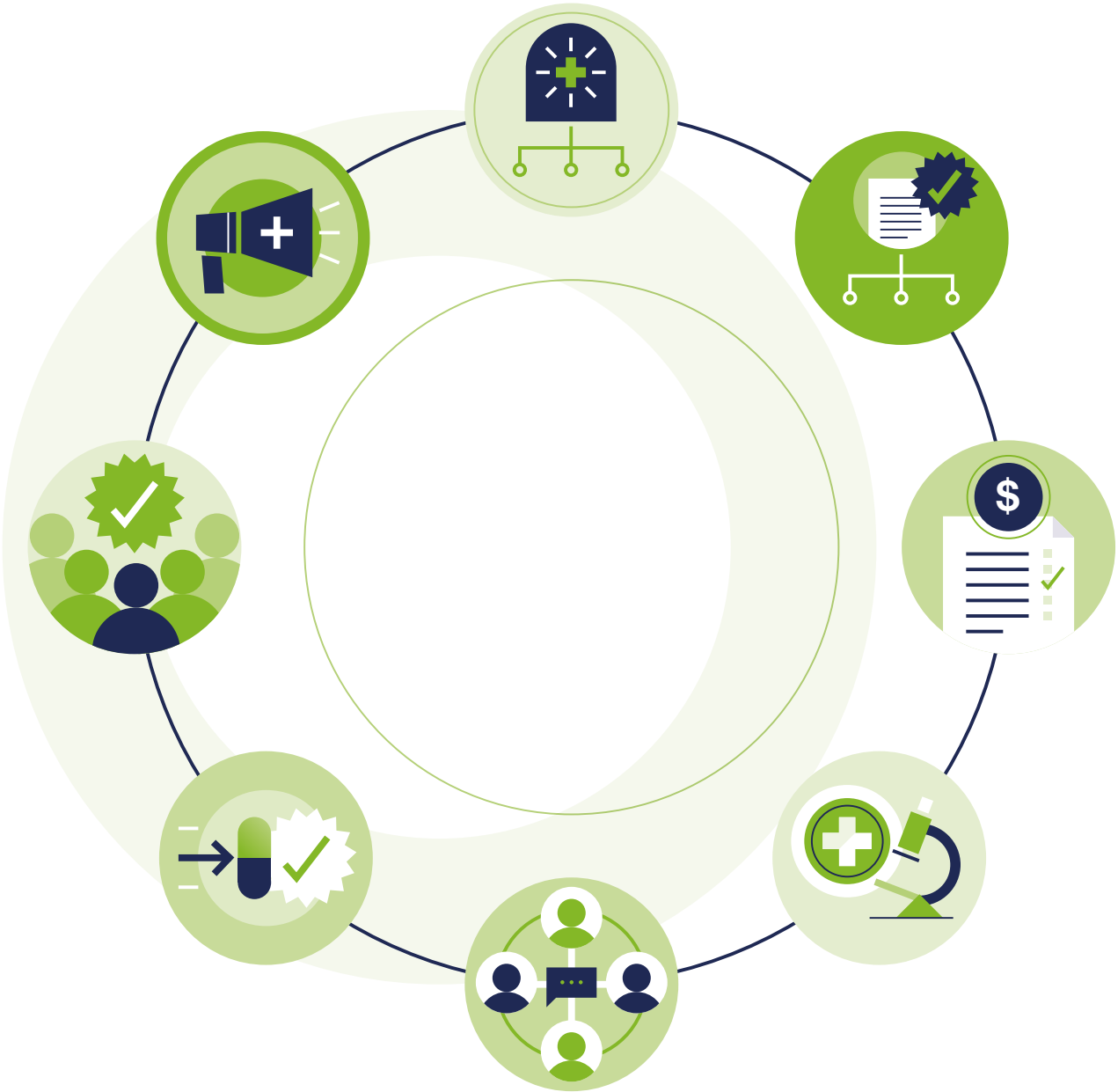
Application of the essential public health functions

an integrated and comprehensive approach to public health



World Health Organization

Public Health Institutes of the World
IANPHI

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Contents

How to use this document v

Acknowledgements vii

Abbreviations viii

Glossary ix

Executive summary xi

I Introduction 1

1. Introduction 3

1.1 Background to the essential public health functions 3

1.2 Objectives 5

1.3 Target audience 5

2. Overview of essential public health functions 6

2.1 Unified list of EPHFs 7

2.2 The primary health care approach incorporating the EPHFs for universal health coverage, health security and healthier populations 10

References: Part I 13

II Technical resources relating to the essential public health functions: subfunctions, public health services, and system enablers 17

3. Approach to the unpacking and repackaging of the essential public health functions 19

3.1 Unpacking the 12 essential public health functions into subfunctions, public health services and system enablers 19

3.2 Defining public health services and system enablers 21

4. Subfunctions 23

5. Public health services and system enablers 32

5.1 Consolidated list of public health services 32

5.2 Key public health system enablers 41

References: Part II 51

III Applying the essential public health functions **52**

6. Strategic review of delivery of the essential public health functions **54**

6.1 Phase I: Planning and determining objectives 56

6.2 Phase II: Collecting and analyzing existing data 58

6.3 Phase III: Formulating findings and recommendations 68

6.4 Phase IV: Implementing recommendations to strengthen delivery 70

6.5 Case study: Strategic review of EPHFs in Ireland 70

7. Examples of applications in strengthening public health stewardship, capacities and services **75**

7.1 Strengthening institutional structures for the delivery of the EPHFs 77

7.2 Defining packages of health services in a national context 82

7.3 Strengthening the promotive, protective and preventive capacities of health and allied sectors 84

7.4 Strengthening the workforce for delivering EPHFs 84

References: Part III **86**

IV Conclusion **88**

8. Conclusion **89**

V Annexes **91**

Annex 1. Unpacking the essential public health functions **92**

Annex 2. Methodological approach of literature review and analysis for unpacking the essential public health functions **138**

Annex 3. List of literature and documents reviewed to inform unpacking the essential public health functions **141**

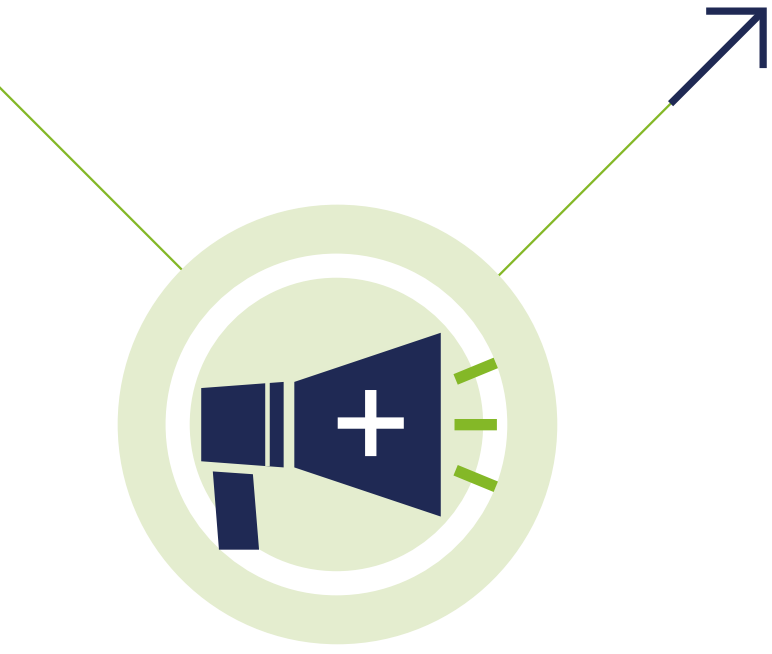
Annex 4. Consultation feedback form **148**

How to use this document

Essential public health functions (EPHFs) have been recognized as a core component of the primary health care approach and are central to an integrated, comprehensive, sustainable and cost-effective approach to enhancing individual and population health and reducing the burden of disease, as articulated in the Declaration of Astana on Primary Health Care and in various World Health Assembly and regional committee resolutions. However, their application to meeting population health needs has remained obscure. This document presents a technical reference package to support comprehensive operationalization of public health using the EPHFs and describes a step-by-step approach to their application, including a number of case examples.

The executive summary provides a high-level overview of the document, including the key technical references and the steps in applying them in a national context. In addition, each part of the document is prefaced by a high-level overview.

The main body of the package consists of five linked thematic parts, but users can focus on the part or parts that are most relevant to their aims.



Part I
provides an introduction and overview of the EPHFs and their application, including the document's objectives and target audience.

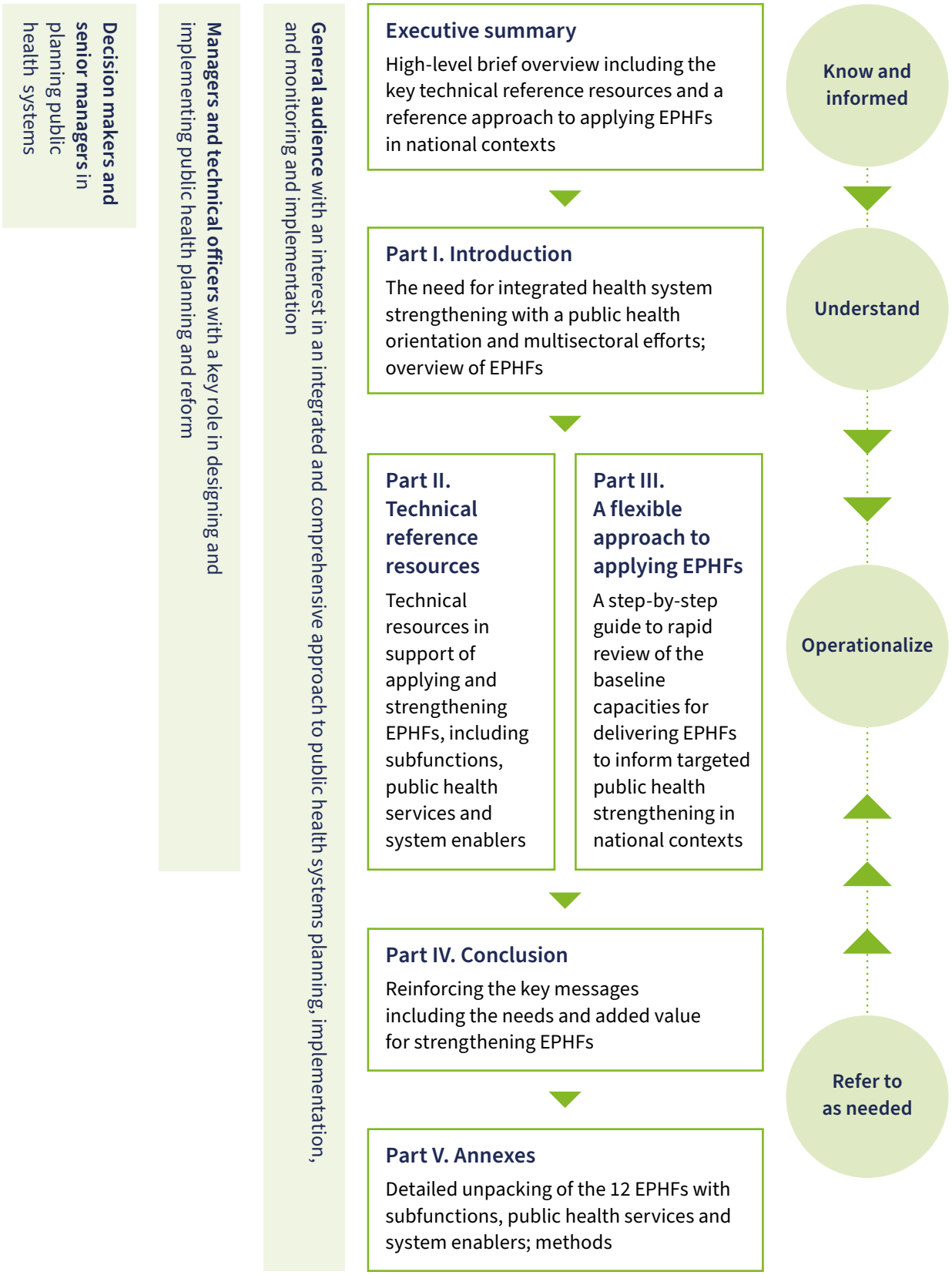
Part II
contains the technical resources that support application of the EPHFs, including the approach applied to unpacking the 12 EPHFs and repackaging them into an essential package of public health services and system enablers. Countries can refer to and contextualize the references presented in Part II to support the comprehensive integration of public health services within health systems and allied sectors, based on population health needs.

Part III
focuses on the application of the EPHFs, including a step-by-step guide to a rapid review of the baseline capacities for the delivery of the EPHFs in a national context. This is complemented by examples of application across the broad categories of strengthening institutional structures for the delivery of EPHFs, defining packages of health services in a national context, strengthening the promotive, protective and preventive capacities of health and allied sectors, and strengthening the workforce for delivering the EPHFs.

Part IV
consists of a concluding chapter, calling for key commitment and actions from Member States in strengthening EPHFs, alongside the partners of the World Health Organization and the International Association of National Public Health Institutes.

Part V
consisting of annexes that provide more details on methodology. Annex 1 describes the detailed unpacking of each of the 12 EPHFs into services and system enablers. Annexes 2, 3 and 4 describe the methods used in the unpacking exercise and development of this document.

How this document and its parts can be utilized by audience with various roles in public health is alluded with the figure on the next page.


Decision makers and senior managers in planning public health systems
Managers and technical officers with a key role in designing and implementing public health planning and reform
General audience with an interest in an integrated and comprehensive approach to public health systems planning, implementation, and monitoring and implementation
Executive summary
High-level brief overview including the key technical reference resources and a reference approach to applying EPHFs in national contexts
Part I. Introduction
The need for integrated health system strengthening with a public health orientation and multisectoral efforts; overview of EPHFs
Part II. Technical reference resources
Technical resources in support of applying and strengthening EPHFs, including subfunctions, public health services and system enablers
Part III. A flexible approach to applying EPHFs
A step-by-step guide to rapid review of the baseline capacities for delivering EPHFs to inform targeted public health strengthening in national contexts
Part IV. Conclusion
Reinforcing the key messages including the needs and added value for strengthening EPHFs
Part V. Annexes
Detailed unpacking of the 12 EPHFs with subfunctions, public health services and system enablers; methods
Know and informed
Understand
Operationalize
Refer to as needed

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Abbreviations

COVID-19	coronavirus disease
CSO	civil society organization
EPHF	essential public health function
IANPHI	International Association of National Public Health Institutes
IHR	International Health Regulations
NCD	noncommunicable disease
NGO	nongovernmental organization
NPHI	national public health institute
PAHO	Pan American Health Organization
PHC	primary health care
PHNA	population heath needs assessment
SDG	Sustainable Development Goal
UHC	universal health coverage
WHO	World Health Organization

Glossary

Clinical care	Efforts to examine, diagnose, treat and restore patients' physical and mental well-being. Clinical care usually involves, among other elements, examination, medical treatment and rehabilitation. Clinical care is usually provided in health facilities by professionals but is increasingly provided in community settings, including the patient's home. In this document, clinical care is used interchangeably with "clinical services" or "medical services".
Disease prevention	Specific, population-based and individual-based interventions in primary, secondary (early detection), and tertiary prevention areas that aim to minimize the burden of diseases and associated risk factors.
Essential public health functions	The set of fundamental, interdependent activities, both within and beyond the health sector, that are required to ensure comprehensive delivery of public health.
Health	A state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity.
Health equity	The absence of unfair, avoidable or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other dimensions of inequality (for example, sex, gender, ethnicity, disability, or sexual orientation). Health equity is achieved when everyone can attain their full potential for health and well-being.
Health promotion	The process of enabling people to increase control over and to improve their health. The basic strategies for health promotion identified in the Ottawa Charter were advocate (to boost the factors that encourage health), enable (allowing all people to achieve health equity), and mediate (through collaboration across all sectors).
Health protection	The protection of individuals, groups and populations through expert advice and effective collaborative action to prevent and mitigate the impact of infectious diseases, environmental, chemical, and radiological threats, and other health hazards.
Health security	The activities required, both proactive and reactive, to minimize the danger and impact of acute public health events that endanger people's health.
Health services	Any activities or services – that is, not limited to medical or clinical services – aimed at contributing to improved health or to the diagnosis, treatment and rehabilitation of sick people.
Health system	An organization structure comprising all the organizations, institutions, people, resources and actions whose primary purpose is to improve, restore or maintain health.
Health system strengthening	(a) The process of identifying and implementing the changes in policy and practice in a country's health system, so that the country can respond better to its health and health system challenges; or (b) any array of initiatives and strategies that improves one or more of the functions of the health system and that leads to better health through improvements in access, coverage, quality or efficiency.

Integrated health services	The coordinated management and delivery of health services so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease management, rehabilitation and palliative care services with primary care and public health at their core.
National public health institute	A government agency, or closely networked group of agencies, that provides science-based leadership, expertise, and coordination for a country's public health activities.
Primary care	A key process or service delivery level in the health system that supports first-contact, accessible, continued, comprehensive and coordinated patient-focused care.
Primary health care	A whole-of-society approach to health that aims to maximize the level and distribution of health and well-being through three components: (a) primary care and essential public health functions as the core of integrated health services; (b) multisectoral policy and action; and (c) empowered people and communities.
Public health	All organized efforts (whether public or private) to prevent disease, promote health and prolong life among the population as a whole. Public health focuses on the entire spectrum of health and well-being from health promotion and prevention of disease, to early identification and management, to rehabilitation and end-of-life care.
Public health services	Actions with a primary focus on improving population-level health outcomes while promoting equity and reducing risks and promoting health at the individual level. Public health services reflect a wide range of activities that seek to positively impact the broader determinants of health and wider issues in the promotion and protection of health, including those across various sectors, such as health, agriculture, education, transport and housing.
Public health surveillance and monitoring	The continuous and systematic collection, orderly consolidation, analysis, interpretation and evaluation of pertinent data on relevant components of health and its determinants in the population or in samples, with prompt dissemination of results to those who need to know, particularly those who are in a position to take action on planning, implementation, and evaluation of public health practice.
Public health system	The constellation of all public, private and voluntary entities that contribute to the delivery of public health services within a jurisdiction. The systems are a network of entities with defined roles, relationships and interactions.
Public health workforce	All individuals who contribute to the delivery of at least one essential public health functions as part of integrated services and systems. This workforce can be conceptually framed as three overlapping circles: (a) core group of public health personnel who have undergone professional training and registration with professional bodies in public health and could be from either health or another background; (b) health and care workers who contribute to one or more public health functions as part of their clinical or social care roles; and (c) personnel from a wide group of other allied occupations who contribute to addressing the determinants of health, for instance, personnel engaged in water and sanitation, food supply chains and road safety.
Universal health coverage	A situation in which all people have access to the full range of quality health services they need, when and where they need them, without financial hardship. It covers the full continuum of essential health services, from health promotion to prevention, treatment, rehabilitation and palliative care.

Executive summary

Introduction

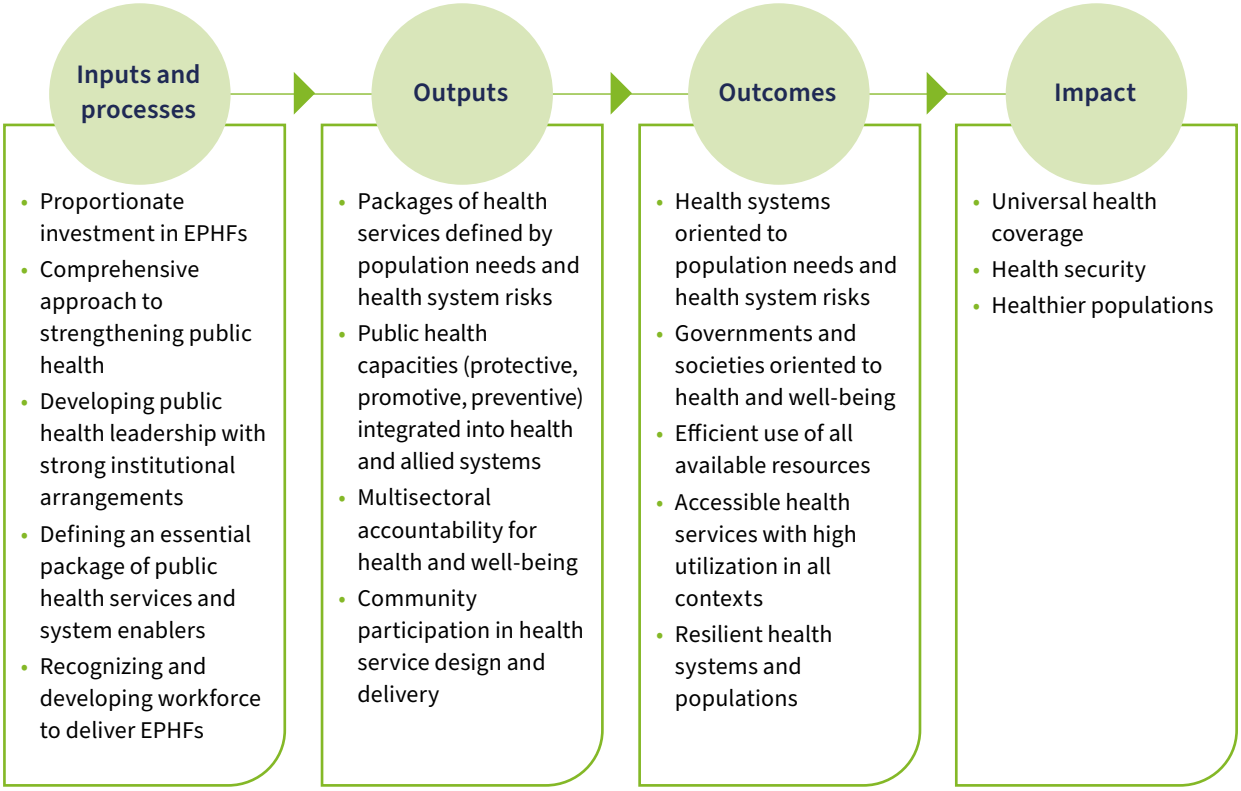
Experience with public health emergencies such as the COVID-19 pandemic clearly demonstrates that weak public health capacities leave populations and health, economic, and social systems vulnerable. Health system challenges are increasing in number and complexity, while health system resourcing, often seen as a cost rather than an investment, remains inadequate. The limited resources available are skewed towards clinical services and emergency response, leaving persistent weaknesses in preventive, promotive and protective capacities. World Health Assembly resolution WHA69.1 of 2016 provided the World Health Organization (WHO) with a mandate to support Member States to strengthen the essential public health functions (EPHFs) while recognizing their critical role in achieving universal health coverage. This has been reaffirmed in the Declaration of Astana on Primary Health Care, 2018, and by global partners since, creating an impetus towards and need for guidance in strengthening public health stewardship and capacities informed by the EPHFs. This technical package provides a range of technical resources and flexible tools in relation to EPHFs, to support comprehensive operationalization of public health in countries.

Overview of the essential public health functions

The unified list of EPHFs consists of 12 activities (Table ES.1) that can be used to operationalize public health in a country. This comprehensive approach to public health orients health systems to population need and health system risks, and governments and societies towards health and well-being. This maximizes health gains within available resources and builds resilience, while reducing population vulnerability and the overall burden on the health system.

The EPHFs can be utilized to plan public health systems, strengthen stewardship and coordination for public health delivery at national and subnational levels, and integrate public health capacities within health and allied sectors. The EPHFs anchor protective, promotive and preventive capacities within health systems while leveraging multisectoral efforts for health. In this way, strengthening health systems with the EPHFs is central to the primary health care approach and supports the achievement of universal health coverage, health security and healthier populations in tandem (Figure ES.1).

Figure ES.1 **Result chain for investing in EPHFs**



Technical resources relating to the essential public health functions

To support operationalization, each of the 12 EPHFs in the unified list was first "unpacked" into subfunctions and then divided into public health services and system enablers (Box ES.1). This unpacking process, described in Chapter 3, 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. Both the unified list with subfunctions and the essential package of public health services and system enablers can be applied and adapted in a national context.

Box ES.1 Working definitions of public health services and system enablers

Public health services are defined as actions with a primary focus on improving 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 (for example, policy and legislation development and implementation; clinical services; social measures; knowledge, awareness, attitude and behavior change; environment modification; and communication and advocacy) that seek to positively impact the broader determinants of health and wider issues in the promotion and protection of health, including those across various sectors, such as health, agriculture, environment, education, transport and housing.

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

The 12 EPHFs represent high-level interdependent activities rather than discrete functions, in recognition of countries' varied approaches to delivering public health. Countries can prioritize and organize the list of activities according to the national context and approach to public health functions and service delivery. The subfunctions represent the unique, yet overlapping, actions required to carry out each respective EPHF (Table ES.1). They clarify the operational scope and boundary of the 12 EPHFs and support countries in identifying all necessary actions and capacities required to operationalize the EPHFs in national policy and planning.

An essential package of public health services and system enablers. Twenty essential public health services and 12 key system enablers (Table ES.2) are defined to a level intended to have global relevance and support national-level planning, and are presented in a way that supports flexible adaptation within a national context. The provision of the essential services represents a continuum from clinical services, behavioral change interventions, to the development and monitoring of policy and other multisectoral approaches to address the wider determinants of health. How the services are prioritized and delivered is dependent on country context, including population needs, national priorities and availability of resources. The identified system enablers are broadly aligned with the health system building blocks, with the explicit addition of multisectoral partnerships and community engagement. While many of these enablers represent existing health system functions, in order to support the integrated delivery of public health services they require the development of certain characteristics (for example, a public health orientation or intentional design to build resilience).

This list of public health services and system enablers represents the full depth and breadth of public health captured within the unified list from a service delivery perspective, and provides a service-based approach to operationalizing the EPHFs. An illustrative mapping tool, whereby services are mapped against service and administrative delivery levels and allied sectors, is also provided in Chapter 6.

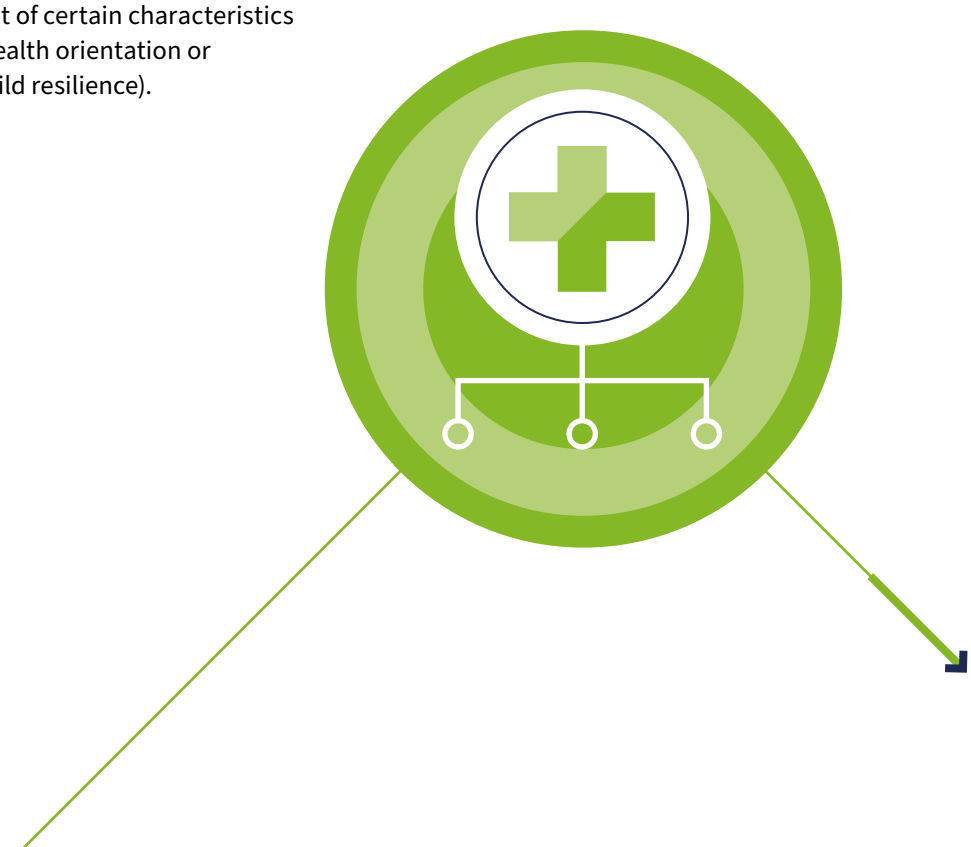


Table ES.1. **List of subfunctions for the unified list of 12 functions**

Essential public health functions	Subfunctions
EPHF 1: Public health surveillance and monitoring Monitoring and surveillance of population health status, risk, 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: Analyzing 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 analyzing 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 Establishing effective public health institutional structures, leadership, coordination, accountability, regulations and laws	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

Table ES.1 (continued). **List of subfunctions for the unified list of 12 functions**

Essential public health functions	Subfunctions
EPHF 4: Multisectoral planning, financing and management for public health Supporting effective and efficient health systems and 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 a 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 (water, sanitation, waste, 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
EPHF 5: Health protection Protecting populations against health threats, for example environmental and occupational hazards and communicable and noncommunicable diseases, including mental health conditions, food insecurity, and chemical and radiation hazards	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 (for example, workers, patients, 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
EPHF 6: Disease prevention and early detection Prevention and early detection of communicable and noncommunicable diseases, including mental health conditions and injuries	Subfunction 6.1: Designing, implementing, monitoring and evaluating interventions, programs, 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 program activities aimed at reducing exposure to risk factors and promoting factors that prevent disease

Table ES.1 (continued). **List of subfunctions for the unified list of 12 functions**

Essential public health functions	Subfunctions
EPHF 7: Health promotion Promoting health and well-being as well as actions to address the wider determinants of health and inequity	Subfunction 7.1: Designing, implementing and evaluating specific interventions or programs to promote health, including changes in behavior, 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 behaviors and reducing inequities
	Subfunction 7.4: Undertaking evidence-based advocacy and health communication to promote healthy behaviors and socioecological environments and build community trust
EPHF 8: Community engagement and social participation Strengthening community engagement, participation and social mobilization for health and well-being	Subfunction 8.1: Promoting participatory decision-making and planning for health and the promotion of societal change that enhances, promotes and protects 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 programs as part of a whole-of-society approach
	Subfunction 8.5: Engaging communities in health preparedness, readiness, response and recovery
EPHF 9: Public health workforce development Developing and maintaining an adequate and competent public health workforce	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 (for example, 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
EPHF 10: Health service quality and equity Improving appropriateness, quality and equity in 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

Table ES.1 (continued). **List of subfunctions for the unified list of 12 functions**

Essential public health functions	Subfunctions
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, as each EPHF is fundamental to the effective delivery of public health, with prioritization depending on country context.

Table ES.2. **Consolidated list of public health services and system enablers for contextualization and application**

Public health services		System enablers
Public health information management services	Ongoing and systematic surveillance of public health-related data, including population health status, health-related behaviors, disease incidence and prevalence, and health risks and hazards	1. Legislative, regulatory, and policy frameworks and tools that underpin public health action 2. Clear and aligned governance structures across national, regional 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) 3. Mechanisms that promote and enable a multisectoral and integrated approach to planning, resource allocation, service delivery and monitoring and evaluation, through whole-of-government and whole-of-society approaches 4. Mechanisms that promote and enable effective participation of communities, social actors and civil society in planning, delivering and assessing public health activities 5. Integrated information systems and mechanisms that enable interoperability and data sharing 6. Adequate and competent public health workforce in line with population health needs and risk profiles 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 8. Mechanisms and processes that promote the integration or reintegration of public health services within horizontal service delivery platforms, as appropriate 9. Appropriate infrastructure to support the delivery of public health services, in line with population health needs and health risks 10. Multilevel and multisectoral monitoring and evaluation activities that are integrated within public health strategies, policies and plans
	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	
	Population health needs assessment and risk profiling to inform policies and planning, and financing and management of population health	
	Syntheses and analyses of available data and evidence (including health, behavioral and social, and other multisectoral data and information) to inform decision-making	
Health protection services	Emergency, contingency and incident planning for public health incidents and emergencies with an all-hazards risk management approach	
	Prevention, mitigation, management and control of health hazards in a defined population	
	Incident response actions	
Health-promoting services	Development, implementation, and monitoring and evaluation of health literacy interventions and programs enhancing the accessibility of health information and empowering communities to participate in public health planning and services	
	Development, implementation, and monitoring and evaluation of health-promoting activities, programs, services and interventions targeting determinants of health	
	Priority health promotion programs and services targeting specific risks, settings or populations, based on population need and priority risks	
	Working within the health sector, with partners and allied sectors, to develop environments that support health and healthy behaviors and reduce inequities through actions on the wider determinants of health	

Table ES.2 (continued). **Consolidated list of public health services and system enablers for contextualization and application**

Public health services		System enablers
Disease prevention services	Development, implementation, and monitoring and evaluation of actions, programs and interventions that aim to prevent adverse health outcomes, based on population need and equity (primary prevention)	11. Availability of essential medicines, medical and surgical products, other health products, non-pharmacological interventions and technologies that support the delivery of public health services to meet population health needs 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
	Development, implementation, and monitoring and evaluation of actions, programs and interventions that support early identification and appropriate management of health risks to minimize their impact based on population need and equity (secondary prevention)	
	Development, implementation, and monitoring of actions, programs and interventions that minimize disease progression, complications or impacts (tertiary prevention)	
Cross-cutting services	Development, implementation, and monitoring and evaluation of public health institutional structures and capacities, including legislation, regulations, policies, institutions and workforce	
	Promotion and development of cross-organizational and multisectoral responsibility and accountability for health and well-being	
	Advocating, implementing and evaluating a community participatory approach to public health planning, including health system planning and health service design that centers around the values of inclusion and equity	
	Communication between relevant stakeholders that ensures the timely exchange of appropriate and accessible information relating to actual and potential public health issues	
	Working with partners in the health sector and allied sectors to provide high-quality health services to all populations in all contexts	
	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	

Applying essential public health functions, services and system enablers

An approach to strategic review of EPHFs in a national context is presented in Chapter 6. It consists of (i) planning and determining objectives; (ii) collecting and analyzing data; (iii) formulating findings and recommendations; (iv) implementing recommendations to strengthen EPHF delivery. This four-phase process utilizes a thematic approach to determine national consideration of the EPHFs in policy and planning; inputs and infrastructure; service delivery; integration and coordination; and learning systems and monitoring and evaluation (Figure ES.2). The scope and objectives are used to develop the framework for analysis with the findings grounded within the contextual realities of the country. This process harnesses the results of existing assessments with a health system or public health focus and enables the rapid establishment of baseline capacities, including integration and multisectoral elements. This can be used to inform the strengthening of health systems with a public health focus. This thematic approach provides a strategic and rapid, yet comprehensive, review of public health capacities and stewardship in a national context. This resource-efficient approach is adaptable to country contexts and priorities, irrespective of the stage of development of public health capacities. Examples of applying EPHFs to review and strengthen the public health system are presented in Chapter 7, including strengthening institutional structures for public health, defining a package of services inclusive of public health delivered at different levels and sectors, and development of the public health workforce, etc.

Table ES.2. **Illustrative matrix summarizing the result of EPHFs consideration across technical areas, in a national context**

		Essential public health functions											
Themes	**Technical areas**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Policy and planning	Legislative frameworks												
	Key policies and strategies												
	Design and prioritization												
	Incorporation into planning												
Inputs and infrastructure	Inputs and infrastructure												
Service delivery	Impact and influence												
	Resource allocation process												
	Incorporation of prevention and promotion												
Coordination and integration	Stakeholder involvement												
	Mechanisms to support coordination												
Crosscutting	Monitoring and evaluation												
	Systematic learning												

Note: The results are illustrative and do not represent the actual mapping in any specific country.
- Limited consideration for EPHFs within specific technical area
- Some degree of consideration for EPHFs within specific technical area
- EPHFs strongly considered and integrated within specific technical area

Conclusion

The essential public health functions provide an integrated, comprehensive and affordable approach to operationalizing public health for achieving health objectives, including universal health coverage, health security, improved population health and well-being, and the health-related Sustainable Development Goals. While the world is recovering from the COVID-19 pandemic and continually confronting complex public health challenges, applying EPHFs is critical as a cost-effective, efficient and sustainable approach to strengthening health systems. They support that such systems are primary health care based and public health oriented for improving population health, while ensuring the greatest benefit within available resources, and contributing to socioeconomic development and recovery. Countries can apply and contextualize the technical resources and operational approach within this package to support their public health strengthening or reform.

Introduction

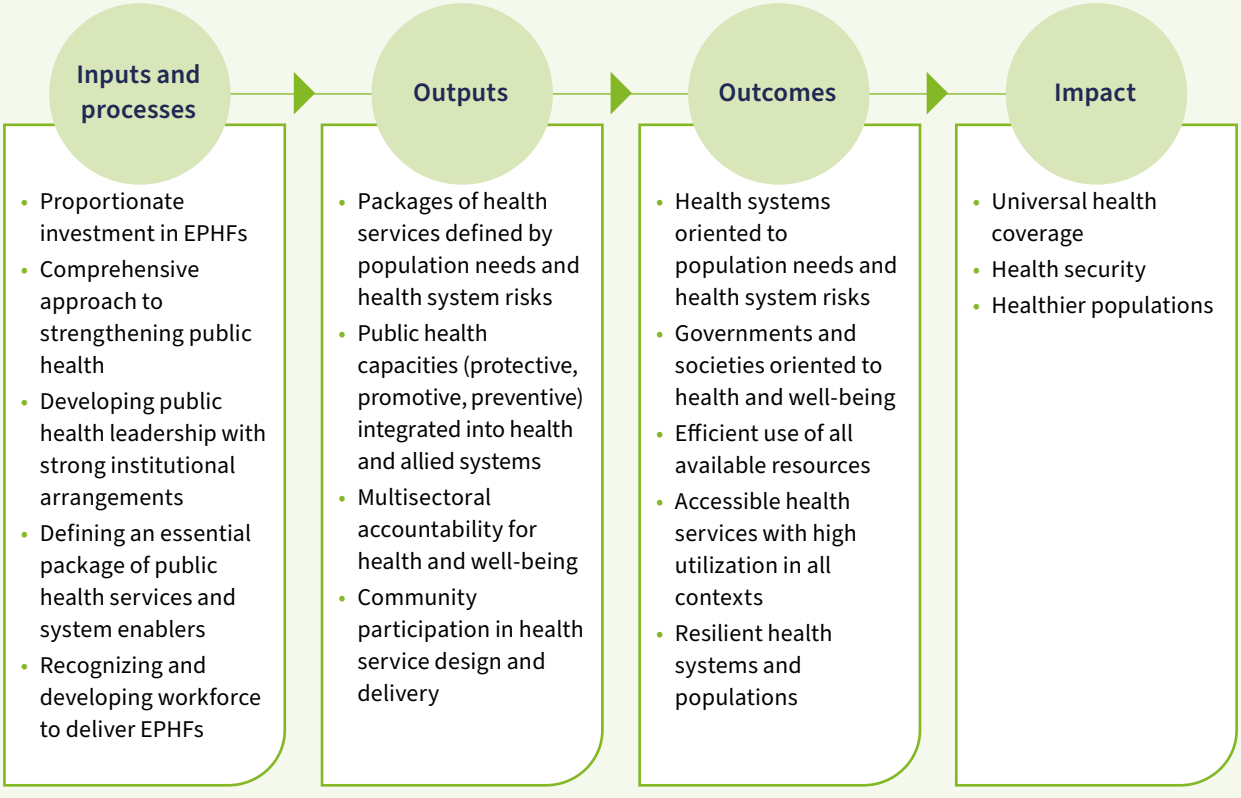
Overview of Part I

Health system challenges have been growing in number and complexity, leading to a renewed interest in applying the essential public health functions (EPHFs) as a means of comprehensively operationalizing public health and building health system resilience.

Despite this global recognition and commitment, and the significant returns on investment associated with public health interventions, recent experience with COVID-19 and other public health challenges has demonstrated persistent weaknesses in global public health capacities. This has created a need for, and an impetus to move towards, technical guidance to support countries' public health strengthening efforts guided by the EPHFs.

In 2021, the World Health Organization (WHO) proposed a unified list of EPHFs consisting of 12 fundamental activities. This unified list of EPHFs is a set of fundamental, interconnected and interdependent activities, both within and beyond the health sector, that are required to ensure effective public health action. The EPHFs ensure that health systems are oriented to population need and health system risks, promoting maximal gains from available resources, while orienting governments and societies towards health and well-being, reducing vulnerability and leveraging multisectoral efforts for health.

The EPHFs provide a bridge between the complementary goals of universal health coverage, health security and healthier populations, highlighting their common requirements and anchoring investments within health system foundations. By strengthening the role of primary care in the delivery of the EPHFs, including emergency preparedness and response, the EPHFs anchor protective, promotive and preventive capacities within health systems, supporting the development of self-reliance and resilience while also leveraging multisectoral efforts for health. In this way, strengthening health systems with primary health care that includes the EPHFs brings together universal health coverage, health security and healthier populations.



1. Introduction

1.1 Background to the essential public health functions.

A public health approach is advantageous for maximizing gains in population health and well-being and supporting equity, while promoting the efficient use of often limited resources (1–3). Many public health interventions are cost effective, even cost saving (2–4). The median return on investment for national and local public health interventions in high-income countries is estimated to be 14.3 euros for every 1 euro spent (4). Despite this, investing in public health is often challenging, as health competes with other government departments for funding (5); even within the health sector, health systems often have a prevailing focus on reactive efforts, such as the provision of disease-based care and responses to incidents and emergencies, and are not adequately focused on promoting and protecting health and well-being or improving the underlying determinants of health (6–9). In national planning and budgeting within the European Union, curative and rehabilitative services incur more than 50% of health care expenditure, while expenditure for preventive care averages less than 3% (7). While the United States of America spends an estimated US$ 3.6 trillion annually on health, less than 3% of that spending is directed towards public health and disease prevention (8). In Africa, the proportion of total health expenditure spent on public health services ranges from 8% to 30%. This relative underinvestment in public health generates billions of euros in additional costs to health services and the wider economy (9).

Traditional approaches to addressing health challenges have often been siloed, leading to health system and service fragmentation with a weakening of public health capacities, including those focused on prevention of disease and promotion of population health at national, subnational and community levels (10–15). In addition, the significant and growing impact of physical, social and economic environments on health is rarely explicitly addressed within health sector planning or supported by multisectoral efforts. The chronic underprioritization, underresourcing and underutilization of public health has been perpetuated by a lack of clarity in defining the operational scope and boundaries of evolving public health practice globally (16). The inability to communicate effectively about public health has made it more difficult to form effective partnerships and secure necessary funding (17).

Box 1 Principles of a public health approach

Focus on impact on populations rather than individuals:

- Act to prevent disease, and promote and protect health and well-being
- Recognize the need for community engagement and strengthening community resilience
- Recognize the strong multisectoral element of health and well-being and their determinants
- Centre around the values of universality and equity

Sources: 18–20.

Box 2 Challenges in operationalizing "public health"

Acheson's widely cited definition of public health – "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts of society" (21) – identifies public health as a multidisciplinary and intersectoral approach. Its ambiguity and expansiveness have allowed the practice of public health to evolve in line with the changing nature and understanding of health. However, different approaches to conceptualization and the lack of clearly defined boundaries and scope have hindered comprehensive operationalization, contributing to a global gap between high-level political commitment and rhetoric and resource allocation, which has manifested in a focus on acute, disease-focused care over disease prevention and health promotion (16)

Countries face a wide range of public health challenges, 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. The increasing complexity of public health challenges has led to a renewed interest in and focus on applying the essential public health functions (EPHFs) as a central element of the primary health care approach and as a means of comprehensively operationalizing public health and building health system resilience, with the cooperation of Member States, WHO and partners (22–25).

The first global reference list of EPHFs, against which countries could benchmark their public health capacities, was proposed by WHO in 1998 in support of the achievement of Health for All (26, 27). Since then, global, regional and national health actors have recognized the importance of EPHFs and have utilized EPHFs to plan, strengthen and assess public health activities and capacities (28–38). World Health Assembly resolution WHA69.1 of 2016 provided WHO with a strong mandate to support Member States in strengthening EPHFs while recognizing their critical role in achieving universal health coverage (39). The Declaration of Astana on Primary Health Care in 2018 reaffirmed global commitment to prioritizing the EPHFs to meet population health needs as a key component of the primary health care approach (40). The 2019 United Nations Political Declaration on Universal Health Coverage also outlined the need to promote more coherent and inclusive approaches to safeguarding universal health coverage, including the provision of EPHFs (41).

Despite this global recognition and commitment, recent experiences with COVID-19 and other public health challenges have demonstrated that the EPHFs are often absent or not well defined between jurisdictions and across national, subnational and health service delivery levels (15). This has created an impetus to move from conceptualization to operationalization of the EPHFs. Examples include the renewal of the Pan American Health Organization (PAHO) EPHF framework to guide the development of public health policies through intersectoral collaboration (24, 42), the renewed commitment by WHO and UHC2030 partners to help countries strengthen EPHFs in health system recovery and reform and to build an integrated approach to policy-making, planning and services (22, 43), WHO's public health workforce competency development roadmap and action plan for implementing the EPHFs (44, 45), the memorandum of understanding signed by the International Association of National Public Health Institutes (IANPHI) and WHO in 2022, which identified "strengthening the essential public health functions

and their role with primary health care in fostering an integrated approach to health systems strengthening and resilience for universal health coverage, health security and healthier populations" as a priority area (46), a strategic review of the EPHFs in Ireland as part of public health reform initiated by COVID-19 impacts to support high-level advocacy for the shift towards public health required to build and ensure health system resilience against current and future threats (23, 47), and the application of the EPHFs to support the government's effort to strengthen public health institutions and improve the public health competencies of the health workforce in Azerbaijan. Most recently, the need for clarifying what public health does and fostering a comprehensive approach to designing and delivering public health services is reiterated at high level policy dialogues in Member States, for example, in the United Kingdom, Ireland and Germany.

As national governments and health authorities, donors, and national and international technical partners seek to build health systems with public health orientation, there is a strong need for technical guidance to support countries' public health strengthening efforts guided by the EPHFs.

1.2 Objectives

The primary aim of this package is to provide a technical reference of subfunctions, public health services and system enablers to operationalize public health, and to provide a step-by-step approach to their application in strengthening health systems and allied sectors in a national setting, as an integral part of the primary health care approach to health system strengthening. In achieving this aim, the document will inform:

- understanding strengths, weaknesses and gaps in public health capacities and stewardship to inform health system strengthening and public health reform;
- strengthening of public health governance and stewardship from national to subnational level;
- planning for essential health services, inclusive of public health services;
- strengthening of service delivery platforms, including primary care, coordinating structures, and the capacity of the health sector and allied sectors to deliver essential public health functions and services;
- development and measurement of the public health workforce

1.3 Target audience

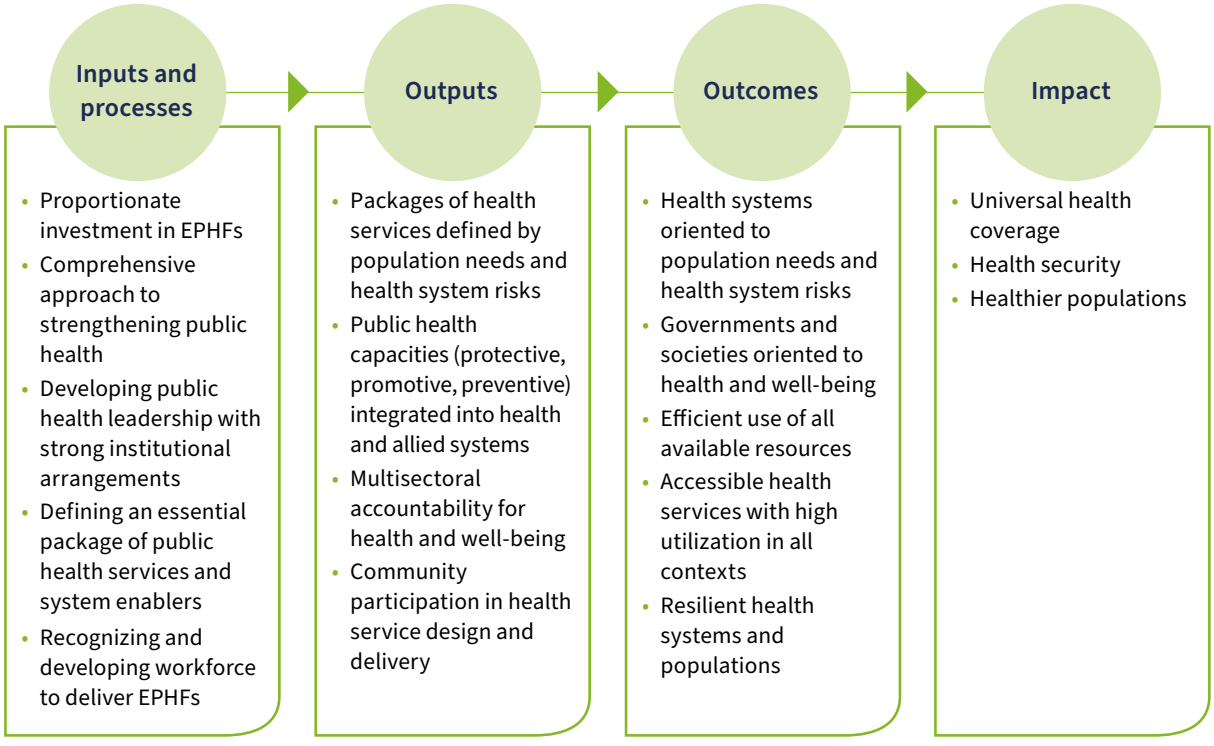
This document is primarily intended for policy-makers, senior public health managers and emergency managers at national level who are linked to processes of planning, implementation, monitoring and evaluation of public health policies, programs or projects, including those working in ministries of health, national public health institutes, and senior health service and sector management, in addition to those working in ministries that influence population health. It can also be used by humanitarian and development partners, including in the United Nations community, that support countries in strengthening health systems and public health capacities, for example networks of public health institutes and professionals, foreign aid agencies, and donor organizations. This document intends to provide information that will assist the target audience in planning and strengthening public health governance, activities, capacities and services from national to local level, in an integrated, comprehensive and collaborative way.

2. Overview of essential public health functions

The essential public health functions are 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 (15, 48). The EPHFs provide a coherent and holistic framing for defining, planning, delivering and reviewing public health capacities within a national context. Comprehensive delivery of the EPHFs ensures that systems for health1 (49, 50) are underpinned by a public health approach, which is ultimately cost saving while supporting health systems to face the complex, multifaceted health challenges of the 21st century.

The EPHFs ensure that health systems are oriented to population health needs and priority risks and that governments and societies are oriented towards health and well-being. The orientation of health systems to population need promotes maximal gains from available resources, aligns governments and societies with health and well-being priorities, reduces vulnerability, leverages multisectoral efforts for health, and reduces overall demand for health services. Comprehensive implementation of the EPHFs supports the achievement of the Triple Billion targets in tandem: 1 billion more people benefiting from universal health coverage, 1 billion more people better protected from health emergencies, and 1 billion more people enjoying better health and well-being.

Figure 1. **Theory of change for investing in EPHFs**



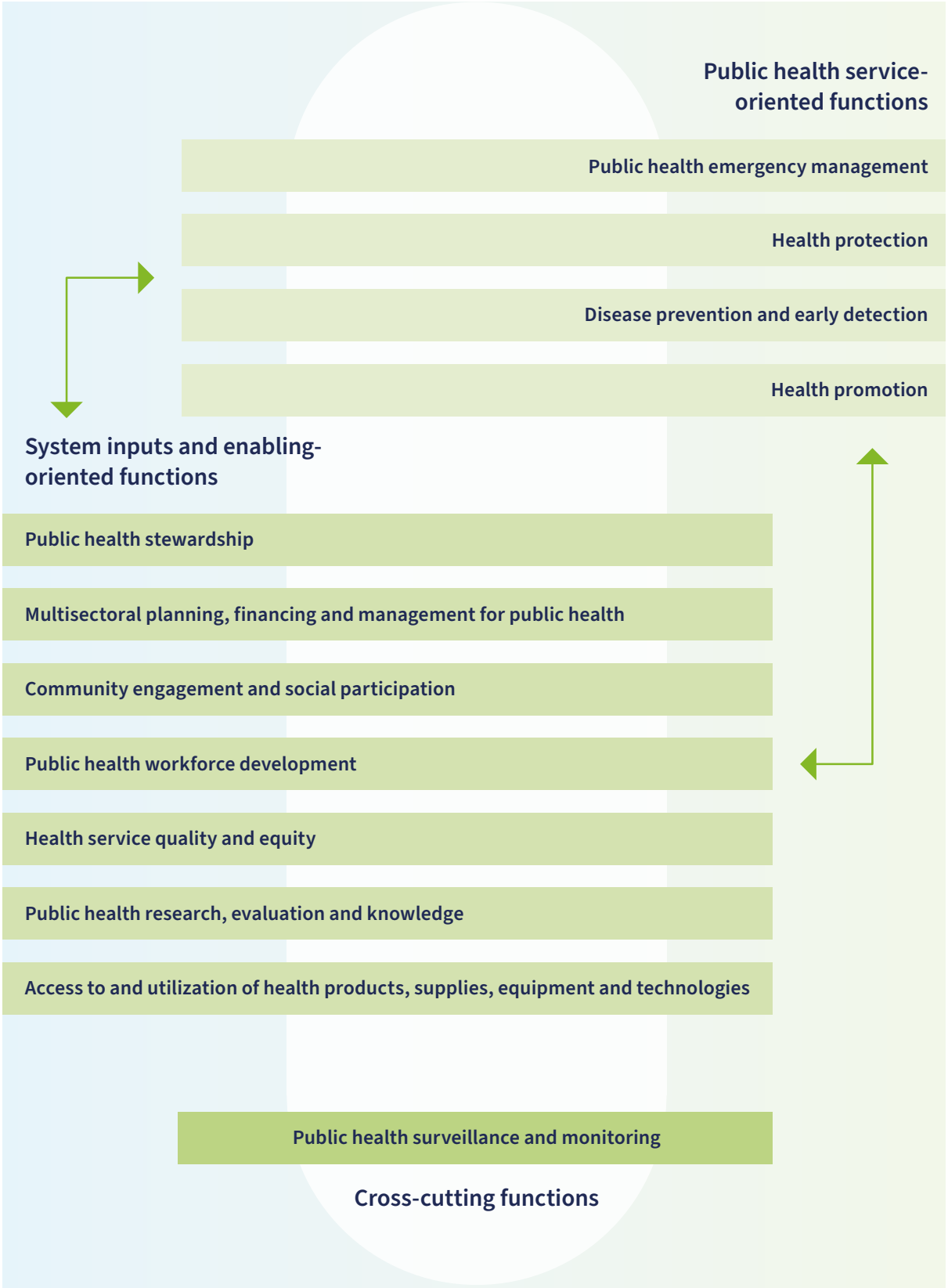
1 "Systems for health" is an emerging concept of health systems that extends beyond the traditional metrics of universal health coverage – access to health care (universality) and financial protection – to explicitly include actions to promote healthier populations and ensure health security. In addition to the provision of health services, systems for health act on the drivers of health to promote healthier communities and protect against threats. Systems for health reimagines health systems using a public health approach.

2.1 Unified list of EPHFs

WHO proposed a unified list of EPHFs consisting of 12 fundamental activities in 2021 (15, 51). This list was derived through an analysis of existing authoritative frameworks as well as drawing on regional experiences and expertise in the context of evolving knowledge and practices in public health (51). The intention was to provide a unified list to support countries to comprehensively develop public health capacities for addressing complex public health challenges in an integrated and cost-effective manner. The analysis demonstrated that while there are differences in how public health is conceptualized and articulated, there is clear global consensus on what constitutes the fundamental role of public health across jurisdictions. This unified list provides a high-level framing that demonstrates how public health can be operationalized with a whole-of-society approach, and also serves as a comprehensive approach to the delivery of public health, including all foundational services and enabling activities needed to respond to diverse, ongoing and future public health challenges (Figure 2).

The 12 EPHFs represent high-level interdependent, interlinked and overlapping public health activities, rather than discrete functions. This is in recognition of the different conceptualizations and approaches to delivering public health in different countries. When applying EPHFs, countries can reorganize the 12 EPHFs into their systems and service delivery platforms according to their specific understanding of and approach to public health. These functions should be coordinated by the government and delivered in an integrated manner, but may be delivered by the government, departments, programs, private entities, units, individuals or groups of individuals. The 12 activities are further delineated into subfunctions, services and system enablers within this document, supporting country contextualization while maintaining a comprehensive approach to public health.

Figure 2. **Essential public health functions by service-oriented, enabling-oriented and cross-cutting functions**



Note: Each of the 12 EPHFs has both a "service" element and an "enabling" element. This illustrative figure presents the 12 EPHFs from a service delivery point of view. Health promotion, protection, emergency management, disease prevention, and public health surveillance and monitoring are considered to be the main domains of public health services. Public health stewardship, multisectoral planning, financing and management, community engagement, workforce, quality and equity of services, research and knowledge, and medical products and health technologies are considered to be the main categories of enablers creating the environment to deliver public health services.

Box 3 Unified list of essential public health functions

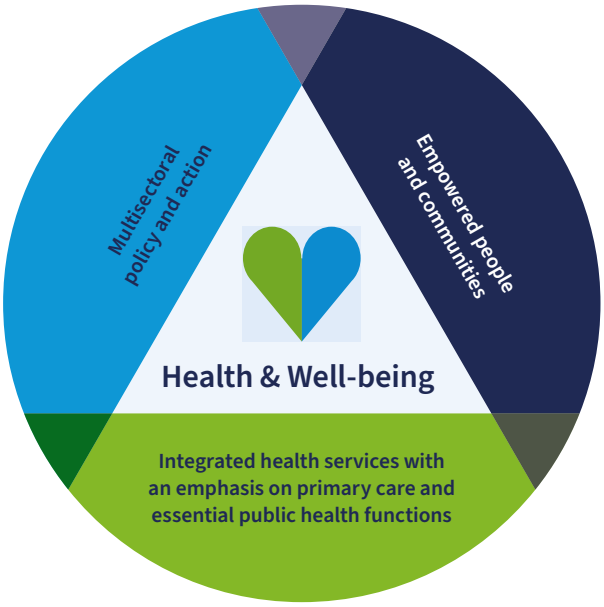
- **Public health surveillance and monitoring:** Monitoring and surveillance of population health status, risk, protective and promotive factors, threats to health, and health system performance and service utilization
- **Public health emergency management:** Managing public health emergencies for international 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 and 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 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: Following expert consultation, the expression of the 12 EPHFs is slightly updated 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, as each EPHF is fundamental to the effective delivery of public health, with prioritization depending on country context.

2.2 The primary health care approach incorporating the EPHFs for universal health coverage, health security and healthier populations

The primary health care approach encompasses integrated health services with an emphasis on primary care and essential public health functions, multisectoral policy and action, and empowering people and communities (Figure 3). While primary care is the key to the delivery of individual health services, it also has a particularly significant role in delivering public health services to promote and protect health and to address broader determinants of health, due to its broad reach and proximity to communities (52).

Figure 3. **The three strands of the primary health care approach**



Source: World Health Organization (WHO) and United Nations International Children's Emergency Fund (UNICEF) (40).

As the population's first contact point with the health system, primary care routinely provides public health services such as screening, vaccination, infectious disease case management and lifestyle counselling. In some countries during the COVID-19 pandemic primary care was underutilized or even bypassed for public health services, including coordinating and conducting specimen collection for testing, surveillance, community engagement, and case management. This increased the burden on hospitals and other actors to provide essential care and implement public health interventions. Primary care was further weakened by low health service accessibility and utilization due to restrictions on movement, the suspension of service delivery or fear of infection. In other countries, primary care was leveraged to deliver public health interventions while maintaining essential services (Box 4).

Box 4 Strengthening health security through primary health care with EPHFs in the Islamic Republic of Iran

The Islamic Republic of Iran has, since 1979, pursued a strategy of primary health care, which has been associated with a steady improvement in health indicators. In rural areas, health services are provided through "health houses" that provide essential health services and are networked to larger comprehensive health care centres for diagnosis and treatment through a formal referral system. In recent times there has been a systematic focus on strengthening the preventive and promotive aspects of primary care to support earlier diagnosis and treatment and reduce the burden on secondary and tertiary care.

The Islamic Republic of Iran is home to more than 5 million asylum seekers, refugees and migrants, who are entitled to the same health services as the resident population. Care for refugees is provided through a refugee health extension programme with clinics constructed within refugee camps. Services are provided through peer physicians and community health workers from the refugee population, trained in the Islamic Republic of Iran.

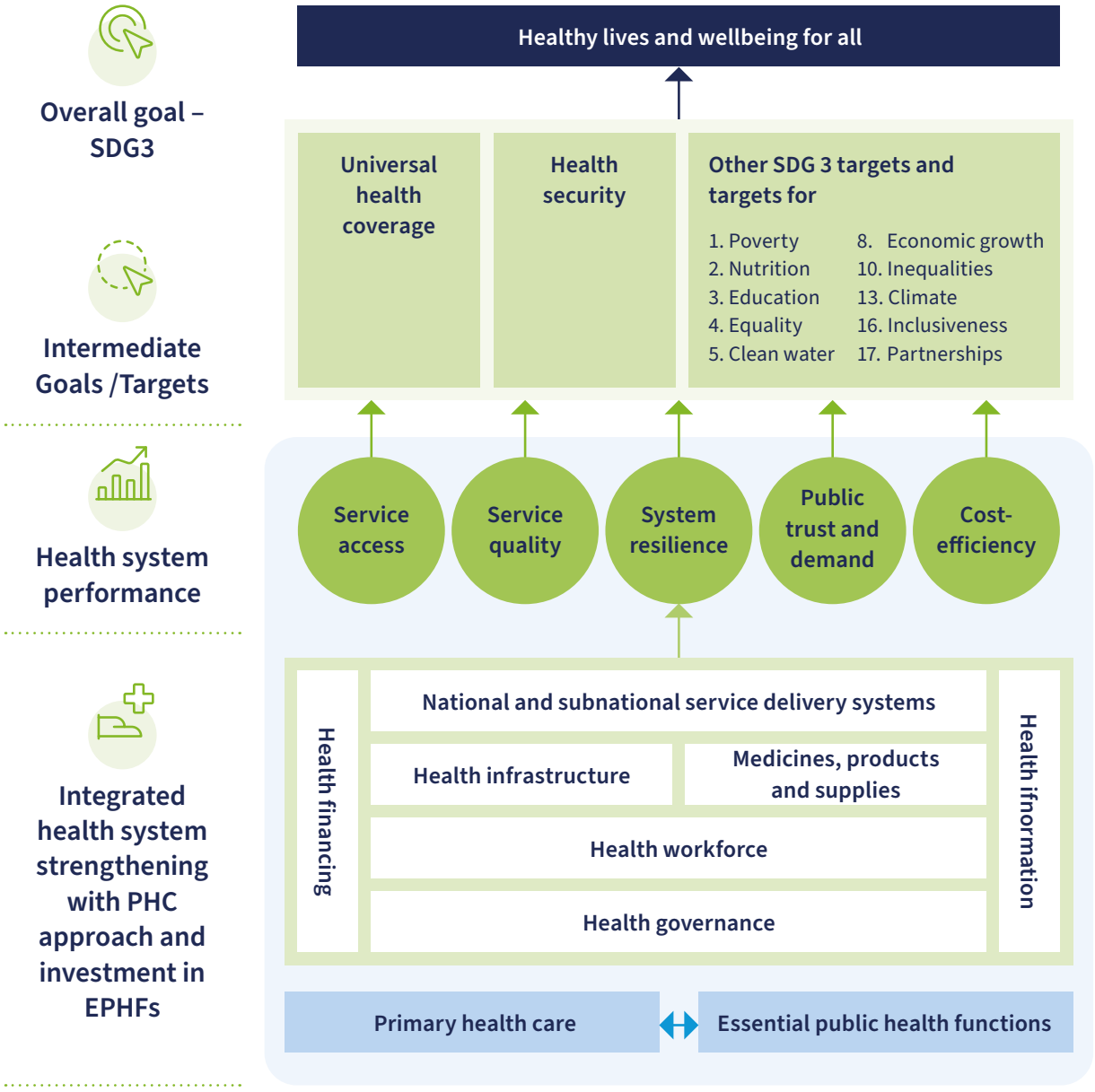
During the COVID-19 pandemic, the country was immediately able to leverage existing primary health care capacity to reduce the burden on secondary and tertiary care, supporting the maintenance of essential services in the community. When vaccines became available, again primary health care infrastructure and supply chains were leveraged to ensure high levels of coverage among the general population. The existing refugee health extension programme was leveraged to reach some of the most vulnerable populations.

The pre-existing investments in strengthening primary care with the EPHFs enabled the Islamic Republic of Iran to achieve vaccination coverage rates that rival figures for many highly developed countries and to achieve success in vaccinating vulnerable migrants where many more developed countries have fallen short.

Source: Gouya, Seif-Farahi and Hemmati (53).

Universal health coverage, health security and healthier populations are three complementary global public health goals. Health system strengthening is the means to achieve them, and the primary health care approach incorporating the EPHFs is the approach to strengthening health systems that supports their achievement. The EPHFs provide a bridge between these goals, highlighting their common requirements and anchoring investments within health system foundations (Figure 4). Strengthening the EPHFs supports primary health care-oriented health systems to move beyond disease-specific care to protect and promote health, realizing health system's full potential in for resilience, promoting healthier populations and sustaining progress towards universal health coverage (54). Recognizing and strengthening the role of primary care in the delivery of public health services (including emergency preparedness and response) strengthens the link between primary health care and health security, promoting both individual and national health security. The essential public health functions complement primary care and offer a holistic, integrated, cost-effective and sustainable means of strengthening health systems with the public health capacities required to advance universal health coverage, health security and healthier populations in tandem (54).

Figure 4. **Primary health care and essential public health functions approach to strengthening health systems, for universal health coverage, health security and healthier populations**



Source: Zhang et al. (51)

References: Part I

1. Public health in the Americas: conceptual renewal, performance assessment, and bases for action. Washington (DC): World Health Organization, Pan American Health Organization; 2002
2. Owen L, Morgan A, Fischer A, Ellis S, Hoy A, Kelly MP. The cost-effectiveness of public health interventions. J Public Health. 2011;34:37–45. doi:10.1093/pubmed/fdr075.
3. Owen L, Pennington B, Fischer A, Jeong K. The cost-effectiveness of public health interventions examined by NICE from 2011 to 2016. J Public Health. 2017;40:557–66. doi:10.1093/pubmed/fdx119.
4. Masters R, Anwar E, Collins B, Cookson R, Capewell S. Return on investment of public health interventions: a systematic review. J Epidemiol Community Health. 2017;71:827–34. doi:10.1136/jech-2016-208141.
5. van der Vliet N, Suijkerbuijk AWM, de Blaeij AT, de Wit GA, van Gils PF, Staatsen BAM et al. Ranking preventive interventions from different policy domains: what are the most cost-effective ways to improve public health? Int J Environ Res Public Health. 2020;17. doi:10.3390/ijerph17062160.
6. Bascolo E, Houghton N, Del Riego A, Fitzgerald J. A renewed framework for the essential public health functions in the Americas. Rev Panam Salud Publica. 2020;44:e119. doi:10.26633/RPSP.2020.119.
7. Healthcare expenditure statistics. Luxembourg: Eurostat; 2022 (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Healthcare_expenditure_statistics#Healthcare_expenditure_by_function, accessed 11 August 2023).
8. The impact of chronic underfunding on America's public health system: trends, risks, and recommendations, 2022. Washington (DC): Trust for America's Health; 2022 (https://www.tfah.org/wp-content/uploads/2022/07/2022PublicHealthFundingFINAL.pdf. accessed 11 August 2023).
9. Kaplan A, Nakhimovsky S, Won A, Avila C. An analysis of spending on prevention and public health in Africa. Washington (DC): United States Agency for International Development, Health Finance and Governance Project; 2013 (https://www.hfgproject.org/report-analysis-spending-prevention-public-health-africa/, accessed 11 August 2023).
10. Ooms G, Ottersen T, Jahn A, Agyepong IA. Addressing the fragmentation of global health: the Lancet Commission on synergies between universal health coverage, health security, and health promotion. Lancet. 2018;392:1098–9. doi:10.1016/s0140-6736(18)32072-5.
11. Lal A, Erondu NA, Heymann DL, Gitahi G, Yates R. Fragmented health systems in COVID-19: rectifying the misalignment between global health security and universal health coverage. Lancet. 2021;397:61–7. doi:10.1016/S0140-6736(20)32228-5.
12. Health financing in the Americas. Washington (DC): World Health Organization, Pan American Health Organization; 2017 (https://www.paho.org/salud-en-las-americas-2017/uh-financing.html, accessed 11 August 2023).
13. Dureab F, Hussain T, Sheikh R, Al-Dheeb N, Al-Awlaqi S, Jahn A. Forms of health system fragmentation during conflict: the case of Yemen. Front Public Health. 2021;9:659980. doi:10.3389/fpubh.2021.659980.
14. WHO South Sudan annual report 2021.

Brazzaville: World Health Organization Regional Office for Africa; 2022.

15. 21st century health challenges: can the essential public health functions make a difference? discussion paper. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/351510, accessed 11 August 2023).
16. Foldspang A. Towards a public health profession: the roles of essential public health operations and lists of competences. Eur J Public Health. 2015;25:361–2. doi:10.1093/eurpub/ckv007.
17. Castrucci BC. The "10 essential public health services" is the common framework needed to communicate about public health. Am J Public Health. 2021;111:598–9. doi:10.2105/Ajph.2021.306189.
18. Martin-Moreno JM, Harris M, Jakubowski E, Kluge H. Defining and assessing public health functions: a global analysis. Annu Rev Public Health. 2016;37:335–55. doi:10.1146/annurev-publhealth-032315-021429.
19. Jarvis T, Scott F, El-Jardali F, Alvarez E. Defining and classifying public health systems: a critical interpretive synthesis. Health Res Policy Syst. 2020;18:68. doi:10.1186/s12961-020-00583-z.
20. Brunton CT, Smedley BD. Building public health capacity to advance equity. J Public Health Manag Pract. 2019;25:411–2. doi:10.1097/PHH.0000000000001040.
21. Acheson ED. On the state of the public health [the fourth Duncan lecture]. Public Health. 1988;102:431–7. doi:10.1016/s0033-3506(88)80080-5.
22. Building health systems resilience for universal health coverage and health security during the COVID-19 pandemic and beyond: WHO position paper. Geneva: World Health Organization; 2021 (https://www.who.int/publications/i/item/WHO-UHL-PHC-SP-2021.01, accessed 11 August 2023).
23. McNicholas T, Hendrick L, McDarby G, Mustafa S, Zhang Y, Saikat S et al. A novel approach to utilising the essential public health functions in Ireland's health systems recovery and reform. Front Public Health. 2022;11. doi:10.3389/fpubh.2023.1074356.
24. Strategy for building resilient health systems and post-COVID-19 pandemic recovery to sustain and protect public health gains. Washington (DC): Pan American Health Organization; 2021 (https://iris.paho.org/handle/10665.2/55858, accessed 11 August 2023).
25. Building resilient health systems to advance universal health coverage and ensure health security in the Eastern Mediterranean Region. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2022 (https://apps.who.int/iris/handle/10665/366621, accessed 11 August 2023).
26. Bettcher DW, Sapirie S, Goon EH. Essential public health functions: results of the international Delphi study. World Health Stat Q. 1998;51:44–54. PMID:9675808.
27. Leowski J. Essential public health functions: their place in the health-for-all policy for the 21st century. World Health Stat Q. 1998;51:55. PMID:9675809.
28. Essential public health functions. Washington (DC): Pan American Health Organization; 2000.
29. Public health in the Americas: instrument for performance measurement of essential public health functions. Washington (DC): Pan American Health Organization; 2001.
30. Regional Committee for the Western Pacific. Essential public health functions (resolution). Manila: World Health Organization Regional Office for the Western Pacific; 2002.
31. Regional Committee for the Western Pacific. Essential public health functions: the role of ministries of health. Manila: World Health Organization Regional Office for the Western Pacific; 2003.
32. Essential public health functions: a three-country study in the Western Pacific Region. Manila: World Health Organization Regional Office for the Western Pacific; 2003.
33. Consultation on essential public health functions with Australia, New Zealand and Pacific island countries, Nadi, Fiji, 8–11 December 2003: report. Manila: World Health Organization Regional Office for the Western Pacific; 2003.

34. Assessment of essential public health functions in countries of the Eastern Mediterranean Region: assessment tool. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2017 (https://apps.who.int/iris/handle/10665/254383, accessed 11 August 2023).

35. Sixty-first Regional Committee for Europe, Baku, 12–15 September 2011. Resolution: strengthening public health capacities and services in Europe: a framework for action. Copenhagen: World Health Organization Regional Office for Europe; 2011.

36. Strengthening public health services and capacity: an action plan for Europe: promoting health and well-being now and for future generations. Copenhagen: World Health Organization Regional Office for Europe; 2012.

37. Self-assessment tool for the evaluation of essential public health operations in the WHO European Region. Copenhagen: World Health Organization Regional Office for Europe; 2015 (https://apps.who.int/iris/handle/10665/344398, accessed 11 August 2023).

38. Regional Committee for the Western Pacific. Transitioning to integrated financing of priority public health services (resolution). Manila: World Health Organization Regional Office for the Western Pacific; 2017.

39. World Health Assembly resolution WHA69.1: Strengthening essential public health functions in support of the achievement of universal health coverage. In: Sixty-ninth World Health Assembly, 2016. Geneva: World Health Organization; 2016 (https://apps.who.int/iris/handle/10665/252781, accessed 11 August 2023).

40. Declaration of Astana: Global Conference on Primary Health Care: Astana, Kazakhstan, 25 and 26 October 2018. Geneva: World Health Organization; 2019 (https://apps.who.int/iris/handle/10665/328123, accessed 11 August 2023).

41. The Political Declaration for the United Nations High-Level Meeting on Universal Health Coverage. New York: United Nations; 2019.

42. The essential public health functions in the Americas: a renewal for the 21st century. Conceptual framework and description. Washington (DC): Pan American Health Organization; 2020 (https://iris.paho.org/handle/10665.2/53124, accessed 11 August 2023).

43. UHC2030. Action on health systems, for universal health coverage and health security: a UHC2030 strategic narrative to guide advocacy and action. Geneva: World Health Organization; 2021 (https://www.uhc2030.org/fileadmin/uploads/uhc2030/Documents/Key_Issues/Advocacy/UHC2030_Health_systems_narrative__actions_paper.pdf, accessed 11 August 2023).

44. 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. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240050402, accessed 11 August 2023).

45. National workforce capacity to implement the essential public health functions including a focus on emergency preparedness and response: action plan (2022–2024)for aligning WHO and partner contributions. Geneva: World Health Organization; 2022.

46. IANPHI and WHO partner to strengthen public health functions and health emergency preparedness. Paris: International Association of National Public Health Institutes; 2022 (https://ianphi.org/news/2022/who-mou.html, accessed 11 August 2023).

47. Essential public health functions in Ireland: perspectives to strengthen public health capacities and stewardship. Geneva: World Health Organization; 2023.

48. Essential public health functions, health systems and health security: developing conceptual clarity and a WHO roadmap for action. Geneva: World Health Organization; 2018 (https://apps.who.int/iris/handle/10665/272597, accessed 11 August 2023).

49. Marten R, Shroff ZC, Hanson K, Davies S, Reddy S, Vega J et al. Reimagining health systems as systems for health. BMJ. 2022;379:o3025. doi:10.1136/bmj.o3025.

50. World Health Organization, Shroff ZC, Marten R, Hanson K. Systems for health: everyone has a role: flagship report of the Alliance for Health Policy and Systems Research. Geneva: World Health Organization; 2022

51. Zhang Y, McDarby G, Seifeldin R, Mustafa S, Dalil S, Schmets G et al. Towards applying the essential public health functions for building health systems resilience: a renewed list and key enablers for operationalization. Front Public Health. 2022;10:1107192. doi:10.3389/fpubh.2022.1107192.

52. Ryan-Ibarra S, Nishimura H, Gallington K, Grinnell S, Bekemeier B. Time to modernize: local public health transitions to population-level interventions. J Public Health Manag Pract. 2021;27:464–72. doi:10.1097/PHH.0000000000001100.

53. Gouya M-M, Seif-Farahi K, Hemmati P. An overview of Iran's actions in response to the COVID-19 pandemic and in building health system resilience. Front Public Health. 2023;11. doi:10.3389/fpubh.2023.1073259.

54. Essential public health functions: a sustainable approach to ensure multi-sectoral actions for population health. Technical brief. Geneva: World Health Organization; 2022 (https://www.who.int/publications/m/item/essential-public-health-functions, accessed 11 August 2023).

II

Technical resources relating to the essential public health functions: subfunctions, public health services, and system enablers

Overview of Part II

In order to support operationalization, each of the 12 EPHFs is delineated first into subfunctions and then subdivided into public health services and system enablers (Annex 1). This unpacking process (Chapter 3) was informed by a review of academic and grey literature relating to national public health systems and services (Annexes 2–4).

Subfunctions (Chapter 4) represent the unique actions required to carry out the respective EPHFs. Depending on organizational and country context, these may be delivered by individuals or groups, with many subfunctions having an overlapping component across EPHFs in line with their interconnected and interdependent nature. The subfunctions help to clarify the operational scope and boundary of the individual EPHFs to support countries in ensuring they have identified the necessary actions and capacities to operationalize EPHFs in national policy and planning.

The public health services and system enablers were streamlined and amalgamated by leveraging the overlapping elements into an essential package of public health services and system enablers (Chapter 5). These represent the full breadth of public health captured within the 12 EPHFs from a service delivery perspective and provide a service-based approach to operationalizing the EPHFs.

Public health services are defined as actions with a primary focus on improving population-level health outcomes, including promoting health equity. While utilizing interventions that reduce risks and promote health at the individual level, public health services reflect a wide range of actions (for example, policy and legislation development and implementation; clinical services; social measures; knowledge, awareness, attitude and behaviour change; environment modification; communication and advocacy) that seek to positively impact the broader determinants of health and wider issues in the promotion and protection of health, including those across various sectors, such as health, agriculture, environment, education, transport and housing.

Public health system enablers are the public health infrastructures, capacities, institutional arrangements and processes that are required within governments at all levels, health service delivery settings, allied sectors and communities to ensure the comprehensive and integrated delivery of public health services.

3. Approach to the unpacking and repackaging of the essential public health functions

3.1 Unpacking the 12 essential public health functions into subfunctions, public health services and system enablers

To support the operationalization of EPHFs, the 12 functions within the unified list were delineated first into subfunctions and then subdivided into services and system enablers using the definitions developed below in an unpacking exercise (Figure 5). This process was primarily informed by reviewing academic and grey literature with a focus on overall national public health systems or specific key components within national public health systems (for example, governance, financing, services, workforce, information). Annex 1 provides the details of unpacking each of the 12 essential public health functions into subfunctions, public health services and system enablers. The unpacking exercise was informed by reviewing literature including existing EPHF frameworks from WHO regional offices and Member States such as the essential public health services by the United States Centers for Disease Control and Prevention. Annexes 2–4 describe the methods underlying the unpacking exercise. Public health services and system enablers of each EPHF were then streamlined and amalgamated by leveraging the overlapping elements (Figure 5). For example, ongoing and systematic surveillance of various components of health-related data is recurrent under the unpacking of several public health functions; therefore, it is streamlined into a public health service "Ongoing and systematic surveillance of public health-related data" in the package. An essential package of public health services and system enablers is proposed based on this streamlining exercise.

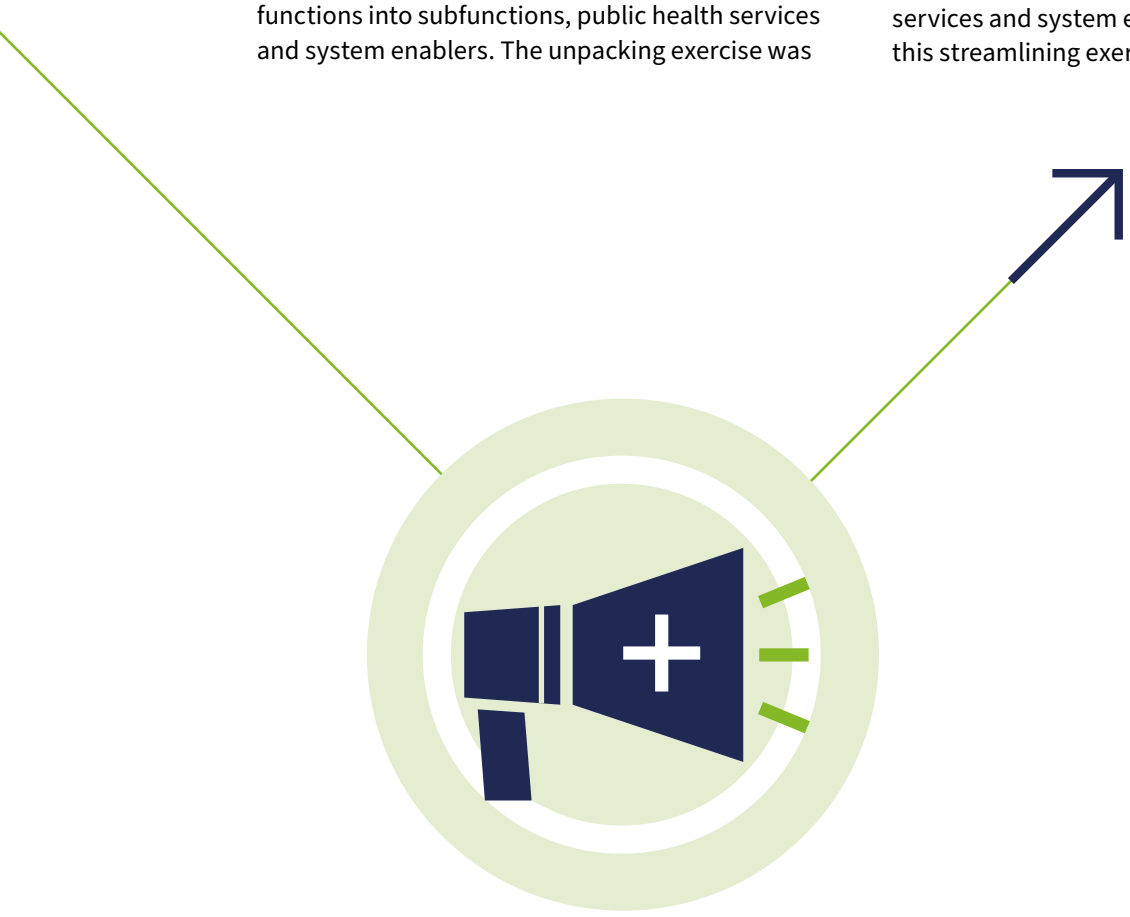
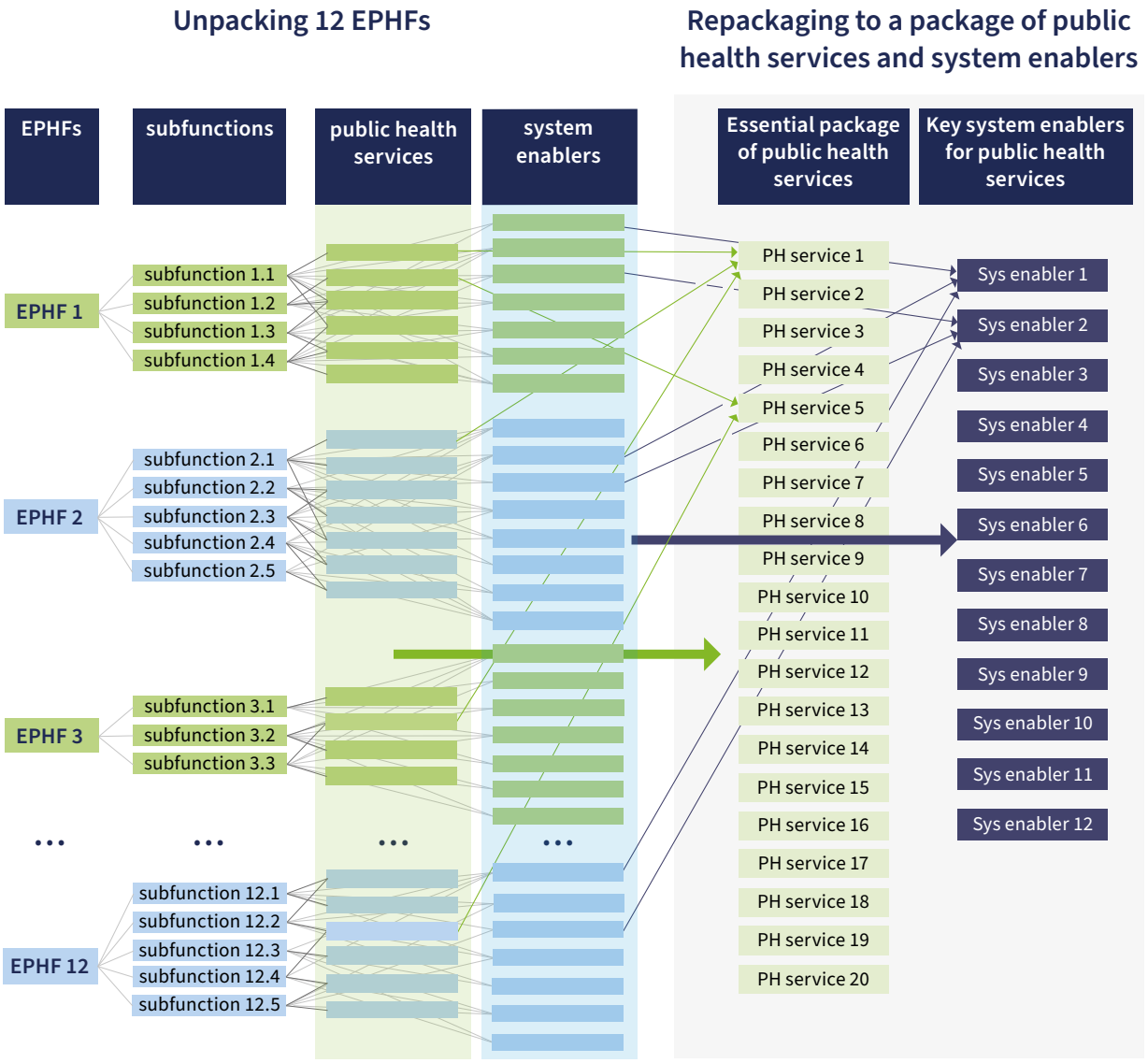


Figure 5. **Unpacking and repackaging of essential public health functions**



Note: The figure illustrates the structure of unpacking EPHF activities moving from activities to subfunctions, then public health services, and system enablers; services and system enablers were then streamlined and simplified and repackaged into essential public health services and system enablers.

3.2 Defining public health services and system enablers

The term "public health service" is used frequently in academic literature and technical resources, such as the United States Centers for Disease Control and Prevention's 10 Essential Public Health Services, but a definition that clarifies what services are to be provided through or within public health (Box 5) could not be identified. This is likely to have hindered national and global stakeholders' efforts in discussing, planning, resourcing and providing comprehensive public health services to meet population health needs. For this reason, a working definition was developed and refined throughout the unpacking process (Box 6). Within the context of this document, public health services are defined as actions with a primary focus on improving 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 (for example, policy and legislation development and implementation; clinical services; social measures; knowledge, awareness, attitude and behaviour change; environment modification; and communication and advocacy) that seek to positively impact the broader determinants of health and wider issues in the promotion and protection of health, including those across various sectors, such as health, agriculture, environment, education, transport and housing.

The essential public health functions and public health services are two perspectives with which to operationalize public health. Public health services deconstruct EPHFs from the perspective of service delivery. Defining public health services supports public health system strengthening with a focus on delivering services that promote the health of all people and equity within a society. EPHFs can provide a reference to plan for the fundamental activities and institutional structures of public health systems.

Box 5. Examples of different conceptualizations of public health services in national contexts

Hungary uses "public health services" as an umbrella term for preventive services and health promotion interventions for the targeted populations *(1)*. "Public health services" in China is understood as services provided by public health institutions and facilities, which are distinguished from medical services. Public health services include several disease-specific services such as management of hypertension and tuberculosis, which are priority health threats in China *(2)*. The description of public health services in the United States is broader but maintains a focus on enabling aspects of public health practice, including activities of promoting policies, systems, and overall community conditions for health for all, as well as activities of removing systemic and structural barriers to achieve equity, but with limited reference to health promotion, disease prevention and health protection services *(3)*.

Box 6. Key characteristics of public health services in this document

Public health services are those actions that have a primary focus on positive population-level health impact, including health equity, while reducing risks and promoting health at the individual level. Public health services reflect a wide range of activities that seek to address wider issues in the promotion and protection of health, such as policy and legislative work, high-level advocacy, clinical services, and social care and work in various sectors, including health, agriculture, education and transport. While some of these services are delivered to individuals who derive a benefit, the impact of the service is evaluated primarily at the population level. Likewise, while some of these services are provided through clinical practitioners to individuals, they are primarily planned and designed to address population-level goals, objectives and needs rather than the needs of the individual receiving the service. The delivery of public health services relies on interactions with health and social services and sectors beyond health, and while the state ensures their delivery, they may be publicly or privately delivered. Public health services can be collectively delivered in a society (for example, by the government, organizations, communities, private sectors, health care facilities) or by individuals (for example, community members, service providers) to ensure the conditions and environment that allow maintenance of the health of the people living in it.

Within health systems, there is often no clear demarcation between clinical services and public health services, and the delivery of many public health services relies on existing health and social care structures, most notably primary care. Many public health services have impact at the individual level as well as at the population level, particularly with respect to clinical services, where public health interventions are delivered at an individual level, for example childhood vaccination programs. Even beyond clinical services, public health services have significant impacts on individual health; for example, although health promotion messages may be delivered to the population, these activities encourage individuals towards healthier lifestyles (for example, through tobacco cessation) *(4)*. While individuals may benefit from public health services, the overall impact of the service is evaluated at the population level, and they are designed and planned to serve population-level goals, objectives and needs (Box 7).

This highlights how the conceptual separation between clinical services and public health services is somewhat artificial. However, the identification of public health services remains important, due to the chronic under recognition of public health services within modern health systems. Defining what services constitute public health services brings added value by enabling recognition, proportionate investment and capacity-building for public health service delivery, including the recognition of the role of primary care and the wider health and multisectoral workforce in contributing to the delivery of public health services. This is especially important in the context of clinical services historically having greater visibility, appealing to policymakers and the public at large, when compared to public health services *(5, 6)*.

Box 7. Interconnection between individual health care and public health services: an example of case management in infectious disease outbreak

The treatment of a patient with an infectious disease with outbreak potential involves appropriate case management. This will include treatment of the initial or index case, which not only benefits the individual (individual-level impact) but also reduces the likelihood of onward transmission (population-level impact). In addition, contact tracing and the administration of any prophylaxis, while benefiting the individual identified and treated (individual-level impact), is primarily aimed at reducing risk within the population (population-level impact). Notification of the case through the appropriate channels informs public health surveillance, and further enhances public health actions to assess and reduce population risk.

In this case, the treatment of the index case is likely to take place within a clinical setting (often primary care) and to rely on the existing health care infrastructure. The activation of surveillance systems, in this case, then also depends on the existing relationship between individuals and the community and primary care.

Public health system enablers refer to the public health infrastructures, capacities, institutional arrangements and processes that are required within governments at all levels, health service delivery settings, allied sectors and communities to ensure the comprehensive and integrated delivery of public health services. They are broadly aligned with the health system building blocks with the explicit addition of community engagement and multisectoralism. These system enablers are probably present within most health systems, but in order to be considered as public health system enablers they must display certain characteristics in support of delivery of the EPHFs.

There is overlap between the areas of work classified as public health services and system enablers. For example, the legislative framework is a key system enabler for most if not all public health services; however, the actions involved in developing, implementing or monitoring legislation is a public health service. Similarly public health surveillance and monitoring service activities are supported by integrated and interoperable health information systems. In this way, public health services are the activities supported by the presence and strength of the system enablers, while system enablers can be developed and strengthened through public health services.

4. Subfunctions

Each EPHF describes a high-level activity that can be broken down into a number of subfunctions (Table 1). The subfunctions represent the discrete actions required to carry out each respective EPHF.

Depending on organizational factors, groups or individuals may be responsible for the delivery of one or more subfunctions. In some cases subfunctions are discrete, but most subfunctions are overlapping both within and across EPHFs in line with their interconnected and interdependent nature (Figure 6). The delineation of EPHFs into subfunctions helps to clarify the operational scope and boundary of individual EPHFs to support countries in ensuring they have identified the necessary actions and capacities to deliver the EPHFs.

Figure 6. **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 systems strengthening approach
	Subfunction 2.5: Engaging with communities and stakeholders in the public, private sector 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 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 systems foundational capacities in all contexts
	Subfunction 4.4: Planning and developing appropriate infrastructure for meeting population health needs, including key services in health facilities (water, sanitation, waste, 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 represent 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

Table 1. **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 1: Public health surveillance and monitoring	This activity involves the regular collection, analysis and interpretation of data relating to population health in support of monitoring, surveillance, planning and evaluation. This includes population health status (including incidence and prevalence of diseases, health conditions and behaviors, morbidity and mortality, and disease profiles), equity, protection and risk factors, determinants of health (including behavioral and social data), health services and system utilization, health workforce performance and distribution and performance of population-based and individual-based health interventions, and potential hazards to health.	Subfunction 1.1: Planning for public health monitoring and surveillance
		Subfunction 1.2: Routine and systematic collection of public health data
		Subfunction 1.3: Analyzing 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	This activity covers the management and coordination of public health emergencies through intrasectoral and multisectoral efforts. It emphasizes a series of closely interrelated measures – comprehensive emergency management that generally includes the prediction and anticipation of risks, forecasting, planning and preparedness, prevention, control and mitigation, early identification, notification, reporting, response, the maintenance and restoration of essential health services, and recovery for public health emergencies originating from all hazard events. It also involves the development and utilization of capacities for public health emergency management as well as the assessment of the functioning of these capacities.	Subfunction 2.1: Monitoring and analyzing 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

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 3: Public health stewardship	This activity covers means, processes and actions that develop and maintain strong public health leadership in institutional structures for public health decision-making. This includes developing institutional and operational structures to lead and coordinate the delivery of public health functions and services and formulating regulations and legislation that enable actions for disease prevention, health promotion and protection.	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	This activity refers to the incorporation of public health orientation into health systems and multisectoral planning and financing for population health. This involves the alignment of health sector and system planning, sustainable financing and program management with population health needs and priorities in a manner that is integrated and public health oriented, and that achieves maximal health gain within available resources.	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 a 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 (water, sanitation, waste, 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

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 5: Health protection	This activity involves the means, processes and actions that protect population health from various natural, human-induced and environmental (including those from climate variability and change, and in the built and lived environment) hazards, which may or may not evolve as public health emergencies. This activity typically covers environmental health, occupational health, food safety, monitoring and control of antimicrobial resistance, diagnosis of behavioral barriers, protection from chemical, biological, radiological and nuclear hazards, protection from infectious diseases, road safety, patient safety, and communicable and noncommunicable diseases (including mental health conditions). This activity typically crosses sectoral and national boundaries to include intersectoral and international efforts that influence potential or identified threats to health.	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 (for example, workers, patients, 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
EPHF 6: Disease prevention and early detection	This activity involves the means, processes and actions that support the prevention and early detection of communicable and noncommunicable diseases, including mental health conditions, in a defined and targeted population. The activity typically covers primary, secondary and tertiary prevention.	Subfunction 6.1: Designing, implementing, monitoring and evaluating interventions, programs, 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 program activities aimed at reducing exposure to risk factors and promoting factors that prevent disease

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 7: Health promotion	This activity involves the means, processes and actions that promote health, act on the wider determinants of health and inequity, and empower populations and communities to increase control over their health and its determinants. This function focuses on health promotion actions, programs and interventions for changes in behaviors, lifestyle, practices, and the environmental and social conditions, including those targeting specific populations, health conditions.	Subfunction 7.1: Designing, implementing and evaluating specific interventions or programs to promote health, including changes in behavior, 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 behaviors and reducing inequities
		Subfunction 7.4: Undertaking evidence-based advocacy and health communication to promote healthy behaviors and socioecological environments and build community trust
EPHF 8: Community engagement and social participation	This activity involves communication and engagement between the community and the public sector to inform, influence, motivate and engage populations on health issues. This involves building an environment where well informed citizens are able to take decisions and responsibilities regarding their own health. This also involves actions to increase health literacy and self-efficacy with the ultimate aim of promoting community participation in health service design and planning and enhancing communities' capacities to access, understand and use information to reduce health risks, prevent disease, promote health, utilize health services, and participate in making and lobbying for health policies within the community.	Subfunction 8.1: Promoting participatory decision-making and planning for health and the promotion of societal change that enhances, promotes and protects 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 programs as part of a whole-of-society approach
		Subfunction 8.5: Engaging communities in health preparedness, readiness, response and recovery

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 9: Public health workforce development	The activity involves the means, processes and actions that manage and optimize the public health workforce, developing the right skills mix and competencies (for example, technical, communication, strategic and leadership skills) to support the delivery and implementation of public health services and activities in line with population health needs.	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 (for example, 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
EPHF 10: Health service quality and equity	This activity involves supporting the provision of and improving equitable access to comprehensive, high-quality and integrated health services that are consistent with population health needs.	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

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 11: Public health research, evaluation and knowledge	This activity involves advancing operational public health research in support of evidence-based decision-making at all levels by developing the evidence base for public health policies, services, interventions and activities, and developing and reviewing new insights into and innovative solutions for public health issues. Research can include epidemiological research; research on the wider determinants of health; health system and services research; research on sectoral and cross-sectoral influences on health and well-being and health system functioning and performance; health economics, including behavioral economics; and behavioral and social science research and analysis. It also involves development of research infrastructure (including formative, intervention, implementation science and policy research) across public health to better enable community participation and complement biomedical approaches.	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

Table 1 (continued). **List of subfunctions**

Essential public health functions	Description	Subfunctions
EPHF 12: Access to and utilization of health products, supplies, equipment and technologies	This activity involves the means, processes and action to assess and promote the equitable provision of, access to and rational use of essential medicines and other medical products and health technologies (for example, vaccines, medicines, diagnostics, medical and surgical equipment and devices, information and communication technologies for health) that are safe, effective and ethical.	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

5. Public health services and system enablers

Public health services are an essential component of integrated health services and the primary health care approach and are necessary for the achievement of universal health coverage, health security and healthier populations *(5)*.

Public health services include population-focused promotive, preventive and protective services informed by intelligence and cross-cutting services, such as policy development, that should be integrated into all relevant service delivery platforms at all levels and delivered in all contexts.

5.1 Consolidated list of public health services

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 within the unified list of 12 EPHFs and represents the full breadth of public health activities encapsulated within that list.

The services are defined to a level intended to support national-level planning and are presented in a way that supports flexible adaptation within a national context. As public health services are delivered at different levels and within different sectors, the provision of these services represents a continuum that includes the delivery of individual clinical services (such as vaccination) and the development and monitoring of policy and other multisectoral approaches to address the wider determinants of health. Examples are provided for each service. This is for illustrative purposes and does not represent an exhaustive list, but rather gives specific examples identified from country service delivery settings. These public health services should be contextualized and incorporated into the national package of (all) essential health services, including individual and population-based services or interventions (See Chapter 7 for the approach to defining an essential package of health services).

While the consolidated list of public health services represents the services that should be delivered in a national context to ensure comprehensive operationalization of the EPHFs, this list is not meant to provide a prescriptive solution that every country must prioritize and deliver. How the services are prioritized and delivered is dependent on country context, including population need and availability of resources. For example, the delivery of public health services and programs varies in Europe because of differing national priorities, demographics, financial resources, and other factors *(7)*. Population health needs are relative for different countries and the prioritization of health services must cater to those needs. The list of public health services aims to provide a reference that countries can consider and adapt based on their population health needs and service delivery platforms. This reference list of public health services can also serve as a reference against which countries can benchmark, reform and strengthen primary health care-oriented health systems integrated with strong public health capacities.

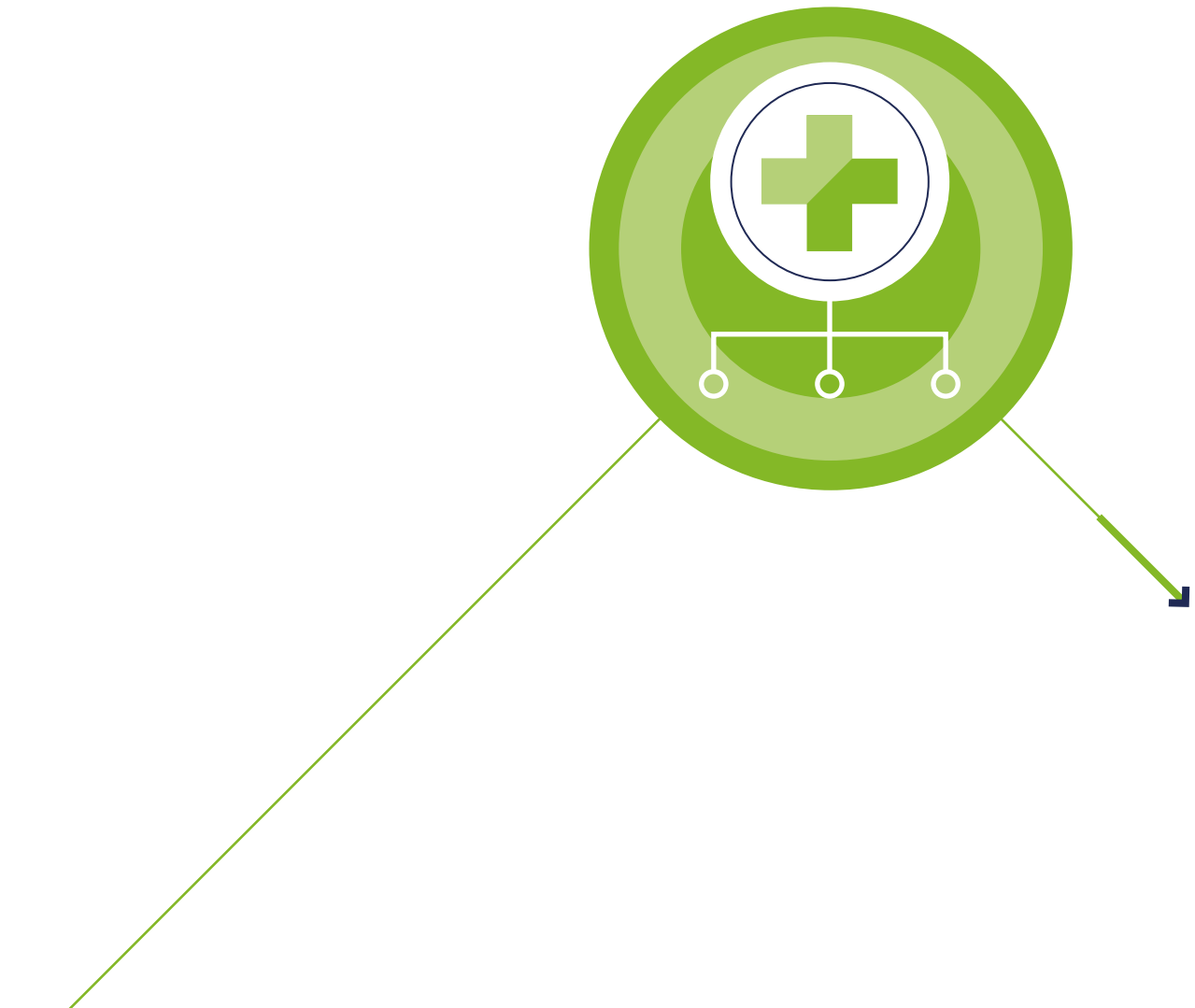


Table 2. **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
Public health information management services	1. Ongoing and systematic surveillance and monitoring of public health-related data, including population health status, health-related behaviors, disease incidence and prevalence, and health risks and hazards	• Infectious disease surveillance • Population risk factor surveillance (for example, smoking, physical activity) • Surveillance of vaccine-preventable diseases • Environmental surveillance of air, soil, 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	• Monitoring of the coverage of essential health services (for example, vaccination uptake, institutional deliveries) and evidence-based care practices (for example, early initiation of breastfeeding, exclusive breastfeeding) • Patient satisfaction surveys • Monitoring of the continuity of essential health services during health emergencies • Monitoring of key impact indicators (for example, maternal mortality ratio, infant mortality rate, stillbirth rate) • Monitoring and reporting on compliance with International Health Regulations (IHR) (2005) • After-action review • Performance of external quality assessment procedures in all health care facilities (for example, certification, accreditation, audits) • Monitoring of the availability of essential resources (for example, medicines, equipment, investigations, logistics) at health care facilities, according to their level of care
	3. Population health needs assessment and risk profiling to inform policies and planning, and financing and management of population health	• 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

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
	4. Syntheses and analyses of available data and evidence (including health, behavioral and social, and other multisectoral data and information) to inform decision-making	• Analysis of health and health system performance indicators and data to support health sector review and planning • Provision of multidisciplinary behavioral and social science strategic analysis and advice based on data, evidence and theory to inform policy- and decision-making • Provision of expert and rapid behavioral insights advice for policymaking including: problem definition; identification of barriers, interventions and research options; and rapid review and recommendations for improvement of policies, programs, services, or communications. • Define and diagnose behaviors 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 policymaking 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 public health workforce to understand baseline capacities, including density relative to population, skills mix, competency, geographical distribution, mobility, and entry and exit rates

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
Health protection services	1. Emergency, contingency and incident planning for public health incidents and emergencies with an all-hazards risk management approach	• 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	• Occupational health programs • Environmental health programs • Food safety programs • Inspection of hygiene
	3. Incident response actions	• 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 infrastructures, including water, electricity and cold chain • Multisectoral coordination during preparedness, readiness and response • Community engagement and risk communication during preparedness, readiness and response

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
Health-promoting services	1. Development, implementation, and monitoring and evaluation of health literacy interventions and programs enhancing the accessibility of health information and empowering communities to participate in public health planning and services	• Community health literacy programs 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 • Ministry of health 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 behavior change communication campaigns to improve community awareness and demand generation for essential health services (for example, routine immunization)
	2. Development, implementation, and monitoring and evaluation of health-promoting activities, programs, services and interventions targeting determinants of health	• Smoking ban • National tobacco control program with the aim of developing greater awareness of the harmful effects of tobacco and existing tobacco control legislation • Defining package of sexual and reproductive care to be delivered
	3. Priority health promotion programs and services targeting specific risks, settings or populations, based on population need and priority risks	• Smoking cessation services • Campaigns to raise awareness of skin cancer and skin protection • School food programs (for example, healthy lunches and provision of food for disadvantaged children) • Chronic disease self-management programs • Sexual and reproductive health interventions and services, including family planning services, counselling to sex workers and other high-risk populations, pre- and post-termination support services • Targeted behavioral modification for risk factors, including brief interventions for behavior change within primary care, referral for specific support services (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 programs, school sexual education programs
	4. Working within the health sector, with partners and allied sectors, to develop environments that support health and healthy behaviors and reduce inequities through actions on the wider determinants of health	• Working with ministries – including ministry of interior and ministry of financing – to develop and implement national tobacco control programs • Working with the education sector on national school food and nutrition program • Working with ministry of planning and local administration and authorities to create healthy cities

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
Disease prevention services	1. Development, implementation, and monitoring and evaluation of actions, programs and interventions that aim to prevent adverse health outcomes, based on population need and equity (primary prevention)	• Development of national immunization guidelines • Development of preconception care program • Development of food fortification program • Universal immunization program providing vaccines to infants, children, pregnant women and other vulnerable groups for prevention of priority diseases • Targeted vaccinations for specific groups, including people traveling to high-risk areas and health care workers • Targeted vaccinations in response to emerging health threats, for example COVID-19, Mpox (monkeypox) • Regular monitoring and evaluation of screening services to ensure quality, effectiveness and equity • Newborn and early childhood screening, such as congenital malformations, newborn bloodspot, developmental delay • Fall prevention programs targeted at the elderly • Noncommunicable disease prevention and control programs
	2. Development, implementation, and monitoring and evaluation of actions, programs and interventions that support early identification and appropriate management of health risks to minimize their impact based on population need and equity (secondary prevention)	• Development of national cancer control program • Development of national newborn bloodspot screening program • Identification of priority screening programs based on population risks • Screening for disease and physical, environmental, behavioral and social risk factors • Opportunistic screening, including routine physical examinations and screening for intimate partner violence, elder or child abuse, Making Every Contact Count program • Screening for self-harm and suicide risk in people with mental, neurological and substance use conditions • Periodic review of disease prevention policies and programs • Substance-related harm reduction programs • Homeless health and social services • Noncommunicable disease prevention and control programs
	3. Development, implementation, and monitoring of actions, programs and interventions that minimize disease progression, complications or impacts (tertiary prevention)	• Integration of secondary prevention in chronic disease management programs • Defining chronic disease rehabilitation packages (for example, cardiac, pulmonary, stroke) • Development of national programs 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

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
Cross-cutting services	1. Development, implementation, and monitoring and evaluation of public health institutional structures and capacities, including legislation, regulations, policies, institutions and workforce	• 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 IHR (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 EPHFs with regard to policy and planning, infrastructure, 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	• Participation in One Health mechanisms • Inclusion of multisectoral stakeholders in the planning, development, implementation, and 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 behavior change techniques
	3. Advocating, implementing and evaluating a community participatory approach to public health planning, including health system planning and health service design that centers around the values of inclusion and equity	• Patient experience surveys • Community involvement in population heath needs assessment (PHNA) • Awareness-raising campaign for community engagement in planning and delivering public health services and programs • Community-led adherence to HIV care support and work to retain in care • Identification of healthy food items in partnership with local restaurants and grocery stores • Establishment of food-sharing collective to support vulnerable populations and reduce food waste • Periodic evaluations and subsequent refinement of communication strategy performed

Table 2 (continued). **List of public health services with illustrative examples**

Domains	Public health services	Examples of public health services
	4. Communication between relevant stakeholders that ensures the timely exchange of appropriate and accessible information relating to actual and potential public health issues	• Dissemination of annual health statistical reports on official website and social media to reach key stakeholders, including the public • Reporting on SDGs and IHR (2005) • Intersectoral risk communication to communicate public health threats transparently • Exchange of local-level good practices between municipalities at conferences and forums • Hotline services whereby members of the public can raise concerns or make requests direct to the relevant minister, 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	Consultative process for legislation Monitoring of health service utilization and access in all contexts Quality assurance Provision of homeless medical services through nongovernmental organizations (NGOs) and civil society organizations (CSOs)
	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	Development of 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 program delivered by the government and NGOs Health technology assessment

Notes:

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.

Examples of public health services: The examples of public health services do not form an official WHO guideline, but aim to provide illustrative examples that help the reader to understand the 20 high-level public health services.

5.2 Key public health system enablers

The effectiveness of public health services is strongly supported by key "system enablers" summarized in Table 3. These system enablers represent the core infrastructure, capacities and mechanisms that support integrative and multisectoral public health capacity development for population health and well-being. Many of these system enablers are cross-cutting, and were repeatedly identified as underpinning multiple public health services in the unpacking exercise (Annex 2). Key system enablers to support the delivery of public health services are required in all government and health service delivery settings, including communities.

The identified system enablers are broadly aligned with the health system components or building blocks identified within the WHO health system framework, which includes leadership and governance, workforce, medicines and technologies, financing, and information systems. In order to support the integrated delivery of public health services, these key system enablers require the development of certain characteristics (for example, a public health orientation or intentional design to build resilience). Key considerations to support this orientation within each system enabler are described in Table 3.

In addition to the health system building blocks, multisectoral partnerships and community engagement are explicitly identified as key system enablers required to support the delivery of public health services. These findings are aligned with other studies on facilitators and inhibitors of public health services and functions *(8–10)*. These system-level and interconnected public health enablers require comprehensive integration in order to be effective. The identified system enablers can serve as a reference when countries plan and review their health systems and capacities from national to local level.

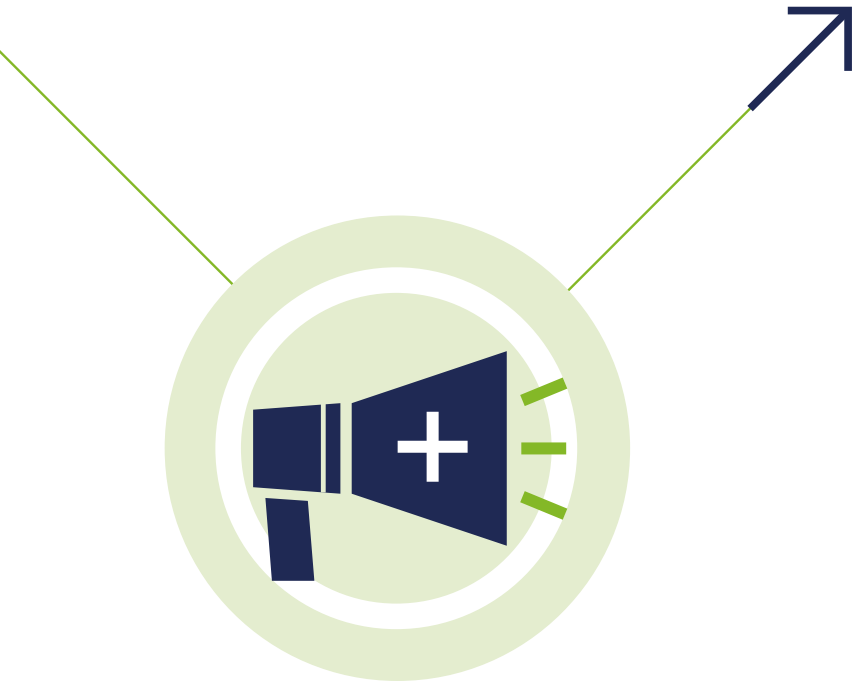


Table 3. **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
1. Legislative, regulatory, and policy frameworks and tools that underpin public health action	Leadership and governance	Governance and policy frameworks	• Policy frameworks setting up strategic vision to public health, including health equity • Regulatory and policy frameworks developed at the national or state level to guide the development and implementation of public health policies and programs at the subnational and local levels • Legislation providing a clear outline of responsibilities and accountabilities at governmental level for setting up structures to assess the health of the population • Legislative, regulatory, and policy frameworks and tools developed for identified priorities 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	• 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, soil, and other media • Cross-cutting policies and interventions to address the main behavioral risk factors for noncommunicable diseases
2. Clear and aligned governance structures across national, regional 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)	Leadership and governance	Political commitment and leadership	• National government commitment to public health as an explicit priority and adequate public health orientation in the health system • Public health institutes or equivalent with a clear mandate for public health 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	• Existence of a strong mandate or authority from public health agencies or the ministry of health with regard to a wide range of public health functions • National health information analytical center 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

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
3. Mechanisms that promote and enable a multisectoral and integrated approach to planning, resource allocation, service delivery and monitoring and evaluation, through whole-of-government and whole-of-society approaches	Leadership and governance	Engagement with private sector providers	• 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 a Health in All Policies approach in other sectors • Multisectoral partnerships in the health policy and intersectoral policy cycle • Multisectoral accountability mechanisms for public health • Mechanisms coordinating services delivered between service levels, organizations, private providers and NGOs	• Memorandum of understanding between public health authorities and law enforcement to enhance coordination of emergency preparedness across sectors • Executive order by the governor mandating the establishment of a Health in All Policies task force to oversee the initiative • Multisectoral mechanisms for risk monitoring and reduction (for example, 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, associations of health professionals, health product industries, health insurance funds, research institutions • Joint external evaluation involving stakeholders in health and allied sectors • Working with private sector, NGOs, CSOs and influencers in the community • One Health collaboration at national and local levels • Joint capacity-building activities, for example involving the human health, animal health and environment sectors

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
4. Mechanisms that promote and enable effective participation of communities, social actors and civil society in planning, delivering and assessing public health activities	Leadership and governance	Engagement of community and other stakeholders	• 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, programs, 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	• Public consultation process on draft regulations, policies and guidance • Participation of community health groups in the development of Healthy Cities and Counties plans and their implementation • Community scorecards as part of the social accountability framework for the Social Action Fund to promote sustained improvements in service delivery • Community environment monitoring supporting pollution-impacted communities in protecting people's health • Community and civil society networks to transfer expertise, capacity, information, best practice and lessons learned • Involvement of NGOs and networks of people living with HIV in awareness generation and behavior change programs

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
5. Integrated information systems and mechanisms that enable interoperability and data sharing	Information	Digital technologies for health	• 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	• Health management information system administering and communicating data from health facilities to district, regional 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 regional 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 doctors, laboratories and all health offices nationwide

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
6. Adequate and competent public health workforce in line with population health needs and risk profiles	Health workforce	Primary health care workforce	• Consideration of density, geographical distribution, competency 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	• 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

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
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	Financing	Funding and allocation of resources	• 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 programs 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	• Sustainable contingency fund • Stable budgets allocated to 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 programs • Earmarked taxes for financing priority public health issues
8. Mechanisms and processes that promote the integration or reintegration of public health services within horizontal service delivery platforms, as appropriate	Service delivery	Models of care Purchasing and payment systems	• Mechanisms in support of integration or reintegration of vertical disease programs in primary and hospital-based care • Effective horizontal integration in governance and organization structure to address disease-specific and life course-specific health concerns	• Integration of preventive services (for example, immunization, preventive health examination, routine check-up 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 the noncommunicable disease control programs into an integrated network of primary, secondary and a part of tertiary care, at district level

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
9. Appropriate infrastructures to support the delivery of public health services, in line with population health needs and health risks	Service delivery	Physical infrastructure Systems for improving the quality of care	• Connected laboratory networks • Availability and distribution of primary care facilities (centers, points) covering the whole population and based on their priority health needs, and with clearly defined responsibilities of primary care in 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	• Network of reference laboratories for monitoring, reporting and investigating antimicrobial resistance and zoonoses in all laboratories in the veterinary sector, food safety, agricultural sector, environmental sector and human health sector • Cold chain infrastructure at 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 (for example, mobile technology, radio, internet) to optimize resource use

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
10. Multilevel and multisectoral monitoring and evaluation activities that are integrated within public health strategies, policies and plans	Leadership and governance	Monitoring and evaluation	• Multisectoral indicators defined in public health strategies, policies and plans • Organizations and institutes performing relevant public health operations regularly have to report their actions to the higher public health authorities	• Monitoring and evaluation framework exists 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 main sectors, including veterinary sector, food safety, agricultural sector, environmental sector, reference laboratories, health care facilities, primary and community care, and pharmacies
11. Availability of essential medicines, medical and surgical products, other health products, non-pharmacological interventions and technologies that support the delivery of public health services to meet population health needs	Access to essential medical products, vaccines and technologies	Medicines and other health products	• 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 medicine, medical, surgical and other health products, non-pharmacological interventions and technologies to support health equity	• Stockpiling of essential medicines, pharmaceuticals, vaccines, nutrition 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 level

Table 3 (continued). **Key system enablers for implementing public health services, including key considerations and examples**

Key system enablers for implementing public health services	Linked health system building blocks	Linked primary health care levers	Key considerations to build resilience and public health orientation	Examples
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	Leadership and governance	Primary health care-oriented research	• 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-based 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	• 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-based policy, and to jointly set the public health research agenda • Agreement between the government and private sector on public health research and facilitation of 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

References: Part II

1. Adany R, Kosa K, Sandor J, Papp M, Furjes G. General practitioners' cluster: a model to reorient primary health care to public health services. Eur J Public Health. 2013;23:529–30. doi:10.1093/eurpub/ckt095.
2. Huang W, Long H, Li J, Tao S, Zheng P, Tang S et al. Delivery of public health services by community health workers (CHWs) in primary health care settings in China: a systematic review *(1996–2016)*. Glob Health Res Policy. 2018;3:18. doi:10.1186/s41256-018-0072-0.
3. The 10 essential public health services. Atlanta: United States Centers for Disease Control and Prevention; 2020 (https://phnci.org/uploads/resource-files/EPHS-English.pdf, accessed 12 August 2023).
4. Jarvis T, Scott F, El-Jardali F, Alvarez E. Defining and classifying public health systems: a critical interpretive synthesis. Health Res Policy Syst. 2020;18:68. doi:10.1186/s12961-020-00583-z.
5. George M. Being fair in universal health coverage: prioritize public health services for low- and middle-income countries. Am J Public Health. 2016;106:830–1. doi:10.2105/ajph.2016.303145.
6. George M. Viewpoint: re-instating a "public health" system under universal health care in India. J Public Health Policy. 2015;36:15–23. doi:10.1057/jphp.2014.37.
7. Safi M, Bertram ML, Gulis G. Assessing delivery of selected public health operations via essential public health operation framework. Int J Environ Res Public Health. 2020;17. doi:10.3390/ijerph17176435.
8. Lebrun LA, Shi L, Chowdhury J, Sripipatana A, Zhu J, Sharma R et al. Primary care and public health activities in select US health centers: documenting successes, barriers, and lessons learned. Am J Public Health. 2012;102 Suppl. 3:S383–91. doi:10.2105/AJPH.2012.300679.
9. Wallar LE, McEwen SA, Sargeant JM, Mercer NJ, Garland SE, Papadopoulos A. Development of a tiered framework for public health capacity in Canada. Public Health. 2016;136:192–5. doi:10.1016/j.puhe.2016.03.009.
10. Van den Broucke S. Strengthening public health capacity through a health promotion lens. Health Promot Int. 2017;32:763–7. doi:10.1093/heapro/dax064.

III

Applying the essential public health functions

Overview of Part III

There are various entry points to operationalizing the EPHFs. This part describes a flexible and adaptable approach to applying EPHFs in order to strengthen public health stewardship, capacities and services, drawing on the technical resources presented in Part II. This rapid and resource-efficient approach provides the foundation for strengthening health systems with a comprehensive public health orientation.

Chapter 6 describes a strategic review of baseline capacities for the delivery of the EPHFs to inform national planning. This four-phase process utilizes a thematic approach to examine the consideration of the EPHFs in a national context with respect to policy and planning, inputs and infrastructure, service delivery, integration and coordination, monitoring and evaluation, and learning mechanisms. The findings are grounded within the contextual realities of the country to ensure that recommendations are actionable. Results can be used to update or develop a national public health strategy, strengthen institutional arrangements for the delivery of public health, develop or update legislation underpinning public health action, inform development of an integrated approach to delivery of the EPHFs, and develop the wider public health workforce. By using a thematic approach underpinned by the EPHFs, it is possible to provide a strategic yet comprehensive review of public health capacities from policy to service delivery levels in a short time frame.

Chapter 7 describes a number of applications of the strategic review presented in Chapter 6. These case examples are presented across a number of broad categories and demonstrate how the strategic review can be adapted to country context, priorities and intentions. Case examples include:

- strengthening institutional structures for the delivery of EPHFs;
- defining packages of health services in a national context;
- strengthening the promotive, protective and preventive capacities of health and allied sectors;
- strengthening the workforce for delivering the EPHFs.

6. Strategic review of delivery of the essential public health functions

The strategic review of delivery of the EPHFs in a national context supports the identification of baseline public health capacities, including strengths to be leveraged and areas for improvement *(1)*. This can then be used to inform national policy and planning to ensure a comprehensive and integrated approach to public health, such as improvement of government structures for public health stewardship, coordination mechanisms for delivering public health functions and services, update of national public health strategy, and development of the public health workforce.

This chapter provides a step-by-step guide to conducting a strategic review of EPHFs, including the administrative and technical steps required to plan and conduct the review. It is based on an approach recently developed and applied in Ireland, focusing on thematic areas from policy and planning to service delivery, underpinned by the unified list of EPHFs developed by WHO in 2021 *(2, 3)*. This new approach harnesses the results of existing assessments that have a health system or public health focus (for example, IHR monitoring and evaluation, health system performance assessment, population health needs assessment, universal health and pandemic review), and enables the rapid establishment of baseline public health capacities, including their integration and multisectoral elements that can be used to strengthen health systems with a comprehensive public health approach. *(2–5)*.

The strategic review is recommended as the first step in operationalizing the EPHFs and consists of four main phases to conduct the review: planning and determine objectives; collecting and analyzing data; formulation of findings and recommendations; and implementing recommendations to strengthen delivery of EPHFs (Figure 7).

Figure 7. **Phases of conducting a strategic review of EPHFs**

6.1 Phase I: Planning and determining objectives

In this initial stage it is important to define a number of project elements, including the project scope and objectives, key deliverables, timeline and resources. These elements can be outlined within a concept note or other scoping documents.

6.1.1 Defining the scope and objectives

Defining the scope is important to ensure all parties involved have clear expectations. At the start, the chosen perspective is identified and the boundaries of the process are clarified (Box 8). Identifying the scope is helped by clarifying the overall aim and goals of the project. The aim articulates the high-level purpose of the work, while the objectives detail how the aim is to be achieved. At this early stage it is also important to identify the roles and responsibilities of key project staff.

Box 8. Defining the scope and aim of the review

The scope of the review should identify the perspective as well as the boundaries. This will inform further steps, including the document search, stakeholder mapping and inclusion, even the formulation of the recommendations and implementation phase. While the EPHFs provide a comprehensive framework to review and strengthen public health capacities, the project objective and intended outcome of the review may have a more narrow focus on specific themes, such as enhancing government structures for coordination of EPHF implementation, mapping and developing the public health workforce with respect to implementing the EPHFs, and strengthening the delivery of public health services. Defining the scope of the review will also help to identify the technical resources most aligned with the objectives.

- **Perspective.** The perspective or project focus will determine which of the technical resources described in Part II is most relevant. If the proposed project aims to examine the institutional arrangement for EPHFs from a national perspective, the unified list of 12 EPHFs with associated subfunctions is likely to be most informative. Should the review favor a focus on health service delivery, then the essential package of public health services and system enablers provides a good starting point. The chosen perspective should also be informed by the country's current approach to public health delivery as well as the intended direction of public health reform. If the current public health delivery model is more service oriented or focused, the essential package of public health services may be most readily applicable. If the current delivery of public health is more diffuse and undefined, the unified list of functions and subfunctions will probably be more applicable. As both subfunctions and public health services represent the full breadth and depth of public health, utilizing either "functions" or "services" in the review should identify aligned strengths, gaps and weaknesses, but the framing of findings and recommendations may differ.
- **Boundaries.** The EPHFs cut across service delivery settings and sectors, and the review will identify gaps, overlaps and weaknesses across these boundaries. It is important to identify the boundaries in terms of objectives and recommendations at the outset. This is to ensure that the objectives are achievable with the given political and government support. For example, if the review is primarily supported by the ministry of health, the boundaries of the review may be informed by the delivery of public health services within the health sector, while inevitably identifying linkages with other sectors. In this case the objectives may relate to strengthening delivery of EPHFs within the health sector while identifying opportunities for intersectoral collaboration. If there is high-level political commitment to the review, an intersectoral approach can be taken whereby the objectives relate to recognizing and strengthening the role of all sectors in promoting and protecting health.

6.1.2 Identifying key deliverables and timelines

Clarification of scope and objectives leads to the identification of key deliverables. It is important to identify the proposed timeline and whether the project is aligned with other timelines, for example, political or planning processes. It can be beneficial to align the project with health system planning and budgetary cycles within a national context to enable implementation, but it is important to note the additional time and resources that will be needed for this alignment. Each deliverable should be assigned to an individual and should have a clear timeline associated with it. At this stage it can be extremely useful to think about implementation of findings and to secure political commitment to some degree for identified next steps. While it is unlikely that full commitment will be obtained in advance to implement findings, securing commitment to addressing key gaps identified or pursuing areas identified for further examination can ensure that the momentum generated by the review is maintained (Box 9). This commitment should be linked to resources or identify a mechanism to secure needed resources for phase IV.

Box 9. Harnessing political momentum

- In the wake of the COVID-19 pandemic, global political momentum and investment is focused on building resilience against further public health emergencies through strengthening emergency response capacities in isolation. While there is no doubt that strengthening local and global health security is important, health system resilience requires a comprehensive approach to operationalizing public health capacities. COVID 19 clearly exploited the weaknesses in preventive and promotive capacities as it concentrated cases and deaths among the vulnerable and marginalized; fueled ongoing transmission; and overwhelmed response and essential health system capacities. By harnessing current focus and investment on comprehensive strengthening of public health capacities using the EPHFs, true health system resilience can be developed, which will ensure health systems are capable of responding to all public health threats, from emerging pandemics to rising rates of noncommunicable diseases.

6.1.3 Defining resources

All resources required to ensure that the work is delivered should be identified, including the project team and lead. It is critical to include country-level personnel with operational experience in the delivery of public health as well as personnel who understand the planning and financing processes and timelines. High-level government support from the ministry of health or equivalent is also essential to ensure the participation of key stakeholders and implementation of findings in later stages. In addition, the working group's technical expertise and experience with the EPHFs is essential. Before any work begins, a budget and the mechanisms to access financial and human resources for all phases should be agreed.

6.2 Phase II: Collecting and analyzing existing data

In this phase of the work, a framework for analysis is developed against which key documents and resources that will form the basis of the analysis will be collected, collated and analyzed. The quality and applicability of the findings will be directly impacted by the quality of the data included; efforts should be made to include internal and unpublished documents, while recognizing the sensitivity of any findings.

6.2.1 Developing a framework for analysis

The framework for analysis consists of a review or comparison of the EPHFs against the current national framework for delivering public health services. This creates the foundation to bridge current understanding of public health in the national context with the EPHF approach, identifying linkages with health and allied systems. This shared understanding then provides the basis for the thematic analysis that examines consideration and delivery of the EPHFs from policy to service delivery level. Findings are then further contextualized to the national context using available population and health system and sector performance data.

Comparison of national public health delivery with EPHFs

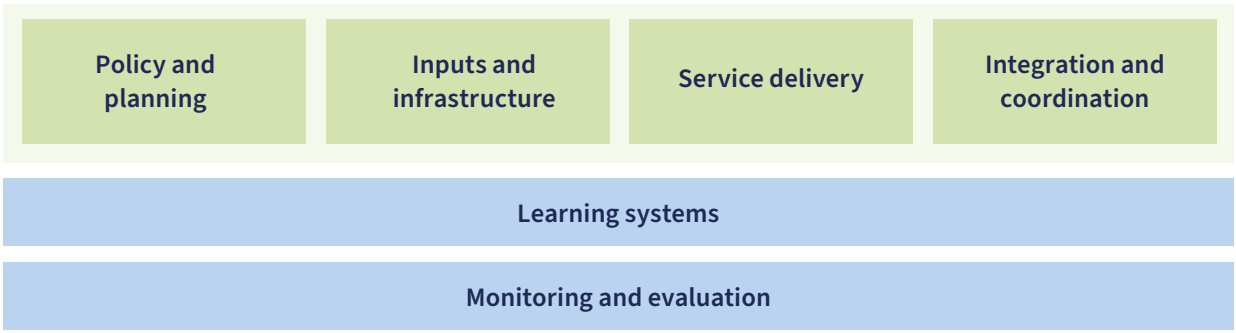
Public health is understood, articulated and operationalized differently in different countries and regions. The starting point for analysis therefore involves a comprehensive comparison of the EPHFs as represented by either the unified list or the essential package of services and system enablers and the current national delivery model to identify commonalities and differences between the EPHFs and the current conceptualization and application of public health practice in the national context. This will help to develop a shared understanding of public health. This should ideally involve individuals with both operational and strategic-level knowledge and experience in the delivery of public health services within the national context, as well as those with a strong understanding of the EPHFs. If the process is to be undertaken using a stakeholder or focus group approach, time should be spent orienting the individuals to the EPHFs prior to starting the exercise.

While the 12 EPHFs are fundamental, countries can and should prioritize the activities based on contextual factors, including population need and priority risks. Using population health needs assessment (PHNA) and risk profiling or their equivalent to inform this prioritization process helps to ensure that public health planning and service delivery are oriented to population need and the health system is prepared for likely risks. An example of this comparison between the EPHFs and the Irish "domains of public health practice" can be found in the case study presented below (section 6.5). This process can be undertaken using the list of 12 EPHFs and their subfunctions, the list of essential public health services and system inputs, or the more detailed list of services and system inputs for each EPHF, depending on the objectives of the review.

Identification of key themes

The approach to strategic review has a thematic focus, rather than focusing on the assessment of the effectiveness of individual EPHFs in a national context. This is a relatively simple approach that is adaptable to country contexts irrespective of the stage of development of public health capacities. By using this thematic approach underpinned by the EPHFs, it is possible to provide a strategic yet comprehensive review of public health capacities from policy to service delivery levels while also capturing the multisectoral elements of protective, promotive and preventive services along with their integration and interdependence. The proposed thematic areas include four pillars (policy and planning; inputs and infrastructure; service delivery; integration and coordination) and two cross-cutting themes (learning systems; and monitoring and evaluation) (Figure 8). Additional themes can be included if identified as having specific and significant relevance to a national context, but this should be in addition to the thematic areas identified above. Depending on the scope and objectives, the focus of the review may be skewed towards a particular thematic area. This can be further defined within the key questions (Table 4). It is also important to consider the overall number of themes, as each additional theme increases the burden and complexity of the review.

Figure 8. **Thematic framework for analysis**



Key questions matrix

For each thematic area, key questions must be identified and agreed within the project team to support data extraction. An awareness of the current delivery of the EPHFs and the aim and objectives of the project is helpful in identifying key questions. The team should identify key questions within each thematic area that capture the depth and breadth of EPHFs, while also recognizing the unique country context and the specific questions to be answered within the review, given the agreed aim and objectives. An example of a key questions matrix is provided in Table 4 and can be adapted to specific country contexts.

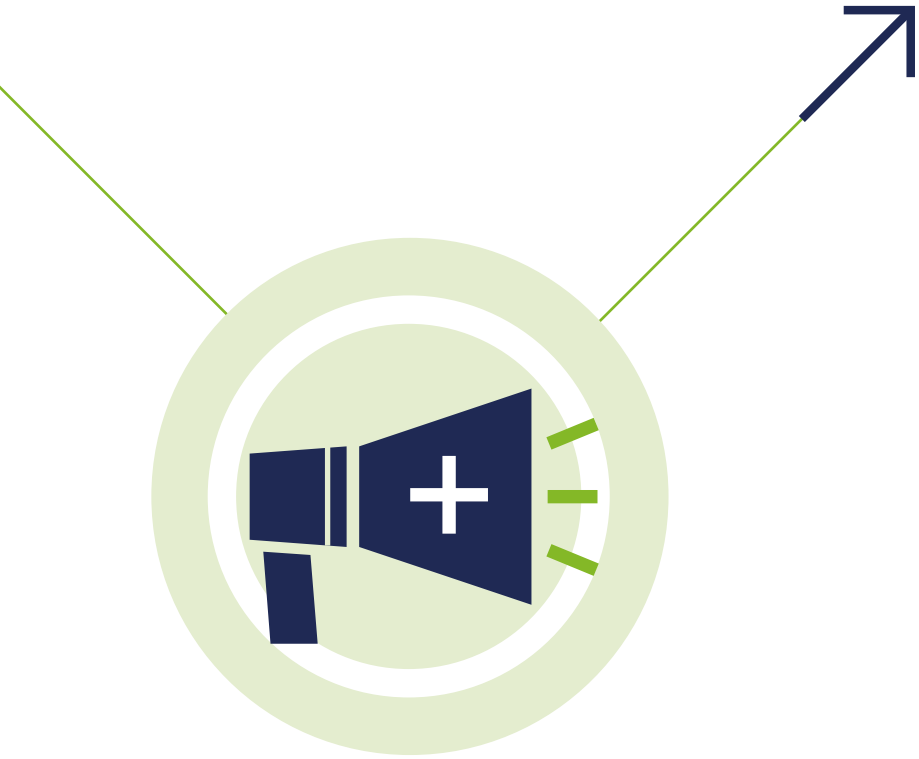


Table 4. **Summary of recommendations on the use of antibiotics to treat or prevent plag**

Area	Example technical questions
Policy and planning	• What legislative frameworks support delivery of the essential public health functions (EPHFs) in terms of individual public health functions, integration between functions and across government departments and sectors, as appropriate? • What are the key policies and strategies that support the EPHFs? Is there evidence of effective implementation of identified strategies? What policies govern the mobilization and allocation of resources for the EPHFs? • How are essential public health services designed and prioritized? • How are the essential public health functions incorporated into broader national health sector planning and aligned in terms of content, resources and governance mechanisms? • Are national health policies and strategies aligned with the primary health care approach incorporating EPHFs, including its values and components? • What are the roles of subnational and local government authorities to support EPHFs? • How are remote and hard-to-reach areas and populations considered within planning for EPHFs?
Inputs and infrastructure	• What are the inputs and infrastructure in the country that supports delivery of the EPHFs (institutes, laboratories, national and regional units, public health schools, research facilities, clinical care facilities, community health facilities, health workforce, skills mix, health information systems and interoperability, other information and communications technology infrastructure, supply chains, relevant organizations beyond the health sector)?
Service delivery	• How are systems and services oriented to deliver and maintain EPHFs in all contexts? • How do the EPHFs impact and influence service provision? What mechanisms are in place that enable public health to inform planning, prioritization and resource allocation? • What are the processes in place to determine resource allocation in all contexts? • Are all EPHFs delivered within current structures either directly or through defined collaborative partnerships (for example, research and development, academia)? • What is the role of primary care in the delivery of EPHFs? Is this recognized and defined? • How are preventative and health promotive interventions incorporated into service provision in all contexts? • Is there uniformity in the delivery of and access to the EPHFs across the country, including hard-to-reach areas and populations?

Table 4 (continued). **Summary of recommendations on the use of antibiotics to treat or prevent plag**

Area	Example technical questions
Integration and coordination	• Who are the key stakeholders involved in the provision of the EPHFs, within and beyond the health sector (for example, animal, agricultural, and environmental actors, community health, services for vulnerable populations, laboratory services, primary care, nongovernment sector, the private sector)? • To what extent are the roles, responsibilities and governance structures of each key stakeholder group clearly defined? • What are the mechanisms that support coordination and integration of EPHFs within the health sector, across sectors, in government departments, and at community level? What mechanisms are in place that enable a whole-of-government and whole-of-society approach? • Is there evidence of duplication of delivery of EPHFs across the system? • What provisions are there to ensure continuity in delivery of EPHFs in cases of public health emergencies? • Are there examples from recent public health events or health system stressors, such as the COVID-19 pandemic or economic downturn, where a whole-of-government and whole-of-society approach was deployed?
Learning systems, monitoring and evaluation	• Is there evidence of systematic capture and translation of lessons learned (including continuous quality improvement)? • How is monitoring and evaluation incorporated into policies and planning for the EPHFs (for example, responsibility, timing, actions)? • How is monitoring and evaluation of EPHFs integrated or aligned to support unified goals within and outside the health sector?

6.2.2 Key document search

The EPHFs involve activities delivered both within and beyond the health system, and it is important to ensure that as many EPHFs as possible are represented within the documents included in the review. As policy and strategy evolve over time, it is important to keep the documents included as recent as possible while representing the full depth of EPHFs. Key strategy and policy documents can be complemented by a grey literature search of relevant national websites, including the ministry of health and other relevant ministries and any health system actors' websites, as well as grey literature databases, such as the WHO IRIS repository, the national bureau of economic research, Global Health, and Open Grey. An illustrative list of system documents is presented in Table 5. Data are extracted from the key documents according to the key questions matrix and further contextualized using health system stressors and public health risks and scenarios.

6.2.3 Country contextualization

Each country context is unique, in terms of how health care and social and public health services are organized and delivered, and also in terms of population characteristics, which have an impact on the range and priority of health services. It is important to recognize and articulate these specificities in order to ensure that policy recommendations are grounded within the realities of the country. This process is informed across three key areas: mapping delivery of EPHFs; health system priorities, stressors and challenges; and reviewing lessons identified from experience with public health incidents. This contextual information is essential, as it makes the final recommendations more actionable, more realistic and more relevant. An example of this can be found in the case study presented in Box 10.

Table 5. **Illustrative list of key documents**

Type	Documents
Health systems	• National health sector strategic plan and complementary national documents pertaining to national legislation, policy or regulation (for example, public health legislation, IHR strategic plans, national action plan for health security, primary care strategy, disease- or program-specific strategic plans) • National quality policy or strategy • Health system assessments • Public health system assessments • Health information management system documentation • Health financing documentation (for example, health budget or national health accounts) • Health research • Subnational operational planning efforts • Health workforce strategies or documentation (with relevance to public health) • Relevant program-specific plans, reports and evaluations (for example, antimicrobial resistance, immunization, maternal, newborn and child health, noncommunicable diseases, cancer)
Health security	• Emergency preparedness and response plans • Health service continuity plans or equivalent • Performance of veterinary services reports • Intra-action and after-action reviews • Risk, hazard and vulnerability assessments or needs assessment during readiness and response • National action plan for health security
Relevant allied sector	• Strategies relating to vulnerable groups (for example, migrants, asylum seekers, drug users) • Housing and education planning strategies • Agriculture sector

Box 10. Case study: mapping the delivery of the EPHFs in health and allied sectors

When extracting data on EPHFs, it is important to take note of the institutions, sectors and health service delivery levels involved in their delivery. This will give an overview of the individuals, groups and delivery platforms involved in the EPHFs and identify any opportunities for alignment, integration or amalgamation. When the review involves a health service perspective (that is, the initial comparison is informed by the essential package of public health services and system enablers), an additional resource has been provided to support this mapping.

The illustrative mapping tool (Table 6) provides a reference to support this mapping and can be used to integrate public health capacities into service and program design or redesign in health and allied sectors. The tool is not intended to be prescriptive and requires country contextualization. Services are first identified within the tool, and then their delivery within the corresponding service and sector settings are explored. Where the delivery of a service is clearly identified and agreed within a setting, it can be noted. Where the delivery of a service is not readily apparent within a setting indicated by the tool, further exploration is needed to determine whether this represents a gap or weakness to be addressed in the country or is due to a contextual difference in the approach to the delivery of the EPHFs.

Table 6. **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 behaviors, 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 and planning, and financing and management of population health			x	x
	Syntheses and analyses of available data and evidence (including health, behavioral and 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-promoting services	Development, implementation, and monitoring and evaluation of health literacy interventions and programs enhancing the accessibility of health information and empowering communities to participate in public health planning and services	x		x	x
	Development, implementation, and monitoring and evaluation of health-promoting activities, programs, services and interventions targeting determinants of health	x		x	x
	Priority health promotion programs 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 behaviors and reduce inequities through actions on the wider determinants of health		x	x	

Table 6 (continued). **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
Disease prevention services	Development, implementation, and monitoring and evaluation of actions, programs and interventions that aim to prevent adverse health outcomes, based on population need and equity (primary prevention)	x		x	
	Development, implementation, and monitoring and evaluation of actions, programs 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, programs and interventions that minimize disease progression, complications or impacts (tertiary prevention)	x		x	x
Cross-cutting services	Development, implementation, and 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 centers 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. Admin 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 centers, environmental health agencies), etc.

Health system priorities, stressors and challenges

The overall aim of the strategic review of EPHFs is usually to propose specific recommendations to inform policy in a national context. In order for these recommendations to be feasible and actionable they must be grounded within the national context, taking account of population health needs, disease status, and health and public health system priorities, as well as any challenges identified. This is achieved through a high-level review of recent and readily available data sources, including documents and reports, such as population health needs assessments, risk assessments, health system performance assessments and monitoring reports and data sets across a number of target areas, including:

- demography and population disease status;
- socioeconomic and environmental conditions;
- health system priorities and performance;
- specific public health system priorities and performance.

Assessing population, health, social and economic status can help to identify immediate priority areas for public health action. In this way, the findings of the strategic review help to support an orientation to population need.

Review of lessons identified from recent experience with public health events and emergencies

Country context is further informed by reviewing country risks and hazards and any recent important incidents or emergencies that have had a significant impact on the health system, including public health emergencies such as the COVID-19 pandemic or natural disasters, but also any significant health system reforms, political upheavals, population displacements, or other potential stressors. Experience with these incidents provides important lessons concerning pinch points and access issues that may not have come to light during normal circumstances. Intra- and after-action reviews often identify significant health system and population issues that should be taken into account when formulating recommendations. While national experience is the most relevant, global lessons identified or lessons from similar settings are also useful to increase the applicability of findings. Lessons and experience identified from beyond the national setting must be critically examined to determine their relevance to the national setting.

6.2.4 Triangulation

As with all desk and document reviews, there is invariably a gap between what is envisioned within strategy, policy and planning documents, even operational plans, and the reality on the ground. In recognition of this, it is important to triangulate data collected and findings by undertaking key informant interviews with individuals involved in the organization and delivery of the EPHFs. This can be done through individual interviews or focus group discussions, using the key questions matrix as a guide, in addition to sense checking any preliminary or emerging findings from the document review.

6.2.5 Stakeholder mapping

To ensure comprehensive representation of the EPHFs, stakeholder mapping should be undertaken to identify the main organizations involved in the delivery of EPHFs, both within and outside the health sector. Key informants can then be identified within each organization and invited for interview. It is important to ensure that all the EPHFs are represented in the interviews, as well as the main sectors involved in EPHF delivery beyond health in the national context. It is not necessary to ensure that each organization is represented within the first round of interviews or focus groups. A targeted approach can be used to fill in any gaps identified following the first round of interviews. Stakeholder mapping should be broad and inclusive, following the principles set out in Box 11 to maximize the comprehensiveness of the review and the chance of successful integration.

Box 11. Key principles underpinning successful stakeholder engagement

Inclusivity. Identify all stakeholder groups that will be affected by the decision being considered, with appropriate consideration given to equity, health sector and program stakeholders, community and multisectoral stakeholders, and maintaining an all-hazards approach.

Transparency. Treat all stakeholders equally with respect to access to information, including consideration of accessibility, identification, and selection, and be clear about the level of influence different stakeholders have in the process.

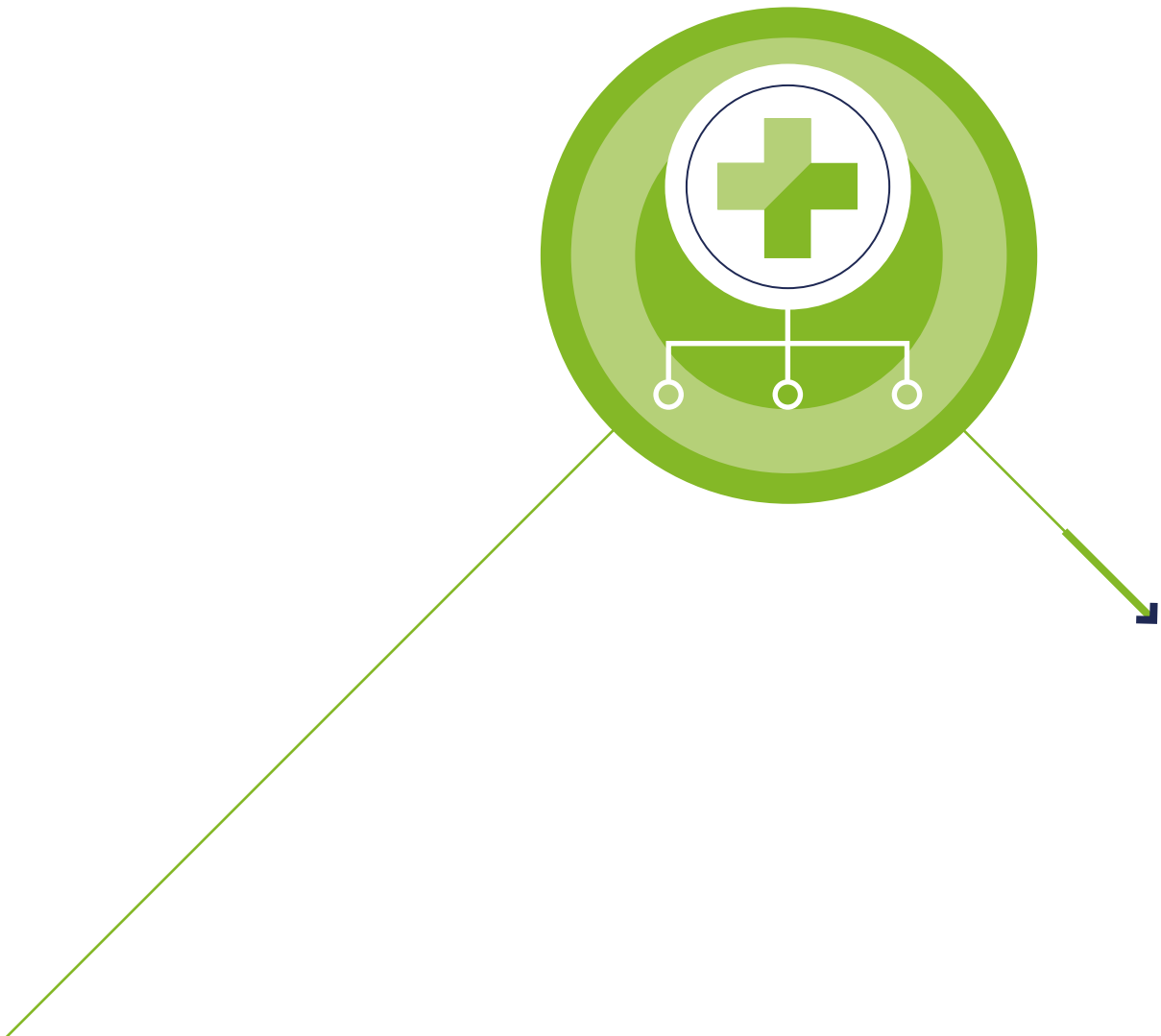
Commitment. Dedicate adequate resources to enable engagement and have a clear process for incorporating stakeholder feedback.

Accessibility. Ensure that active participation is not blocked by barriers such as language, culture or opportunity.

Accountability. Inform stakeholders how their contributions have or have not influenced the outcome and ensure good governance practices.

Responsiveness. Ensure the process is open to stakeholder input and change.

Willingness to learn. Create an environment that supports the two-way exchange of information.



6.3 Phase III: Formulating findings and recommendations

The mapping process should have identified where gaps and weaknesses exist in the delivery of the EPHFs. These should be explicitly and sensitively outlined, accompanied by evidence. As many reviews of this nature can be seen to be overly negative, it is important to highlight any strengths identified in the course of the mapping and identify how these can be leveraged in support of recommendations. It is equally important to highlight any recent improvements and examples of good practice, where identified. Following the collation of all data, several thematic areas for action should become apparent. These can be broad and rather generic but should be further refined into actionable recommendations for each theme. The aim of the review should be considered when bringing each thematic area for action to concrete recommendations. Figure 9 provides an illustration of formulating recommendations based on objectives and thematic findings, while Figure 10 gives a matrix template that can be utilized to summarize the strengths and weaknesses in relation to consideration of EPHFs.

Figure 9. **Illustration of formulating recommendations based on objectives and thematic findings**

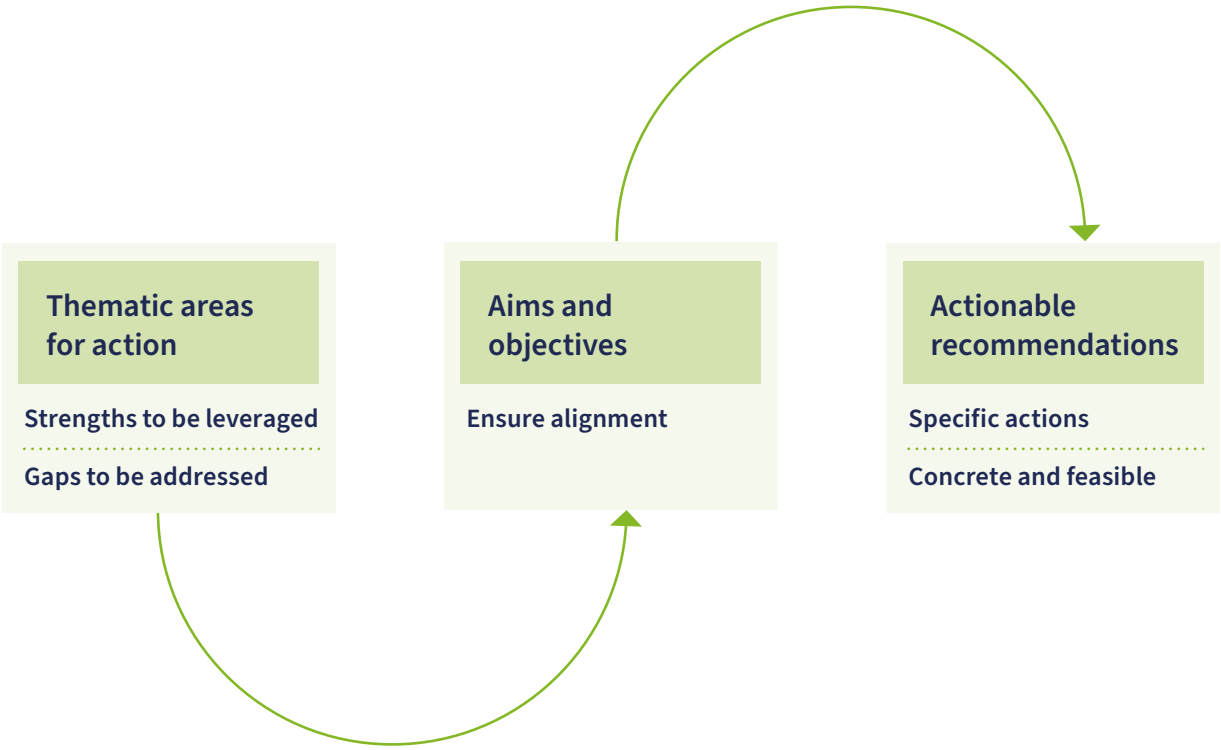


Figure 10. **Illustrative matrix summarizing the consideration of EPHFs in specific technical areas**

		Essential public health functions											
Themes	**Technical areas**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Policy and planning	Legislative frameworks												
	Key policies and strategies												
	Design and prioritization												
	Incorporation into planning												
Inputs and infrastructure	Inputs and infrastructure												
Service delivery	Impact and influence												
	Resource allocation process												
	Incorporation of prevention and promotion												
Coordination and integration	Stakeholder involvement												
	Mechanisms to support coordination												
Crosscutting	Monitoring and evaluation												
	Systematic learning												

Limited consideration for EPHFs within specific technical area
Some degree of consideration for EPHFs within specific technical area
EPHFs strongly considered and integrated within specific technical area

Recommendations are arguably the most important part of the work and should clearly represent the collation of all the data contained within the report up to this point. They should articulate specific strategies that are aligned with and address the findings within the report. For recommendations to be actionable, they must be clear and succinct, specific and feasible. Ideally, recommendations come in the form of one action-oriented sentence that outlines a specific action to be taken to address a specific gap or weakness identified within the report. Recommendations must also be feasible, and this relates to operationalization, the availability of resources and political will. Box 12 describes the key enablers to ensure the effective implementation of EPHFs identified in previous publications *(1,6)*.

Box 12. Key enablers to ensure effective implementation of EPHFs in a national context

While the strategic assessment of EPHFs provides the foundation, operationalizing the EPHFs as an integrated approach to health system strengthening requires action across a number of key areas. These were identified in the review of relevant literature and available global experience with EPHFs that formed the basis of the technical document 21st century health challenges: can the essential public health functions make a difference? *(1)*, as well as in the paper Towards applying the essential public health functions for building health systems resilience: a renewed list and key enablers for operationalization *(6)*. These areas, essential to supporting the operationalization of EPHFs, include:

- high-level political commitment to public health, with consideration of EPHFs as an integrated and comprehensive approach to operationalizing public health;
- institutional arrangements for coordinating delivery of essential public health functions;
- monitoring and evaluation of essential public health functions;
- multisectoral accountability mechanisms for delivering essential public health functions;
- public health workforce development to implement essential public health functions.

These interconnected areas are essential and strategic to ensure institutionalization and implementation of public health. These enablers are aligned with the key strategic levers identified within the primary health care operational framework, including political commitment and leadership, governance and policy, funding and allocation of resources, engagement of communities and other stakeholders, engagement with private sector providers and the primary health care workforce, and monitoring and evaluation *(7)*.

6.4 Phase IV: Implementing recommendations to strengthen delivery

The approach to strengthening the delivery of the EPHFs within a national setting will vary with the findings and recommendations of the review, the scope and objectives, and the intention for public health reform nationally. There is no single approach to strengthening the EPHFs; it can be achieved in a number of ways. This phase should be informed by the strengths identified within the review and the identification of existing resources – human, infrastructural and financial – that can be leveraged in order to support any identified gaps. This helps to support recommendations in a resource-efficient manner while promoting alignment. A number of applications are presented in the following chapter.

Section 6.5 presents a case study of the strategic review of EPHFs in Ireland.

6.5 Case study: Strategic review of EPHFs in Ireland

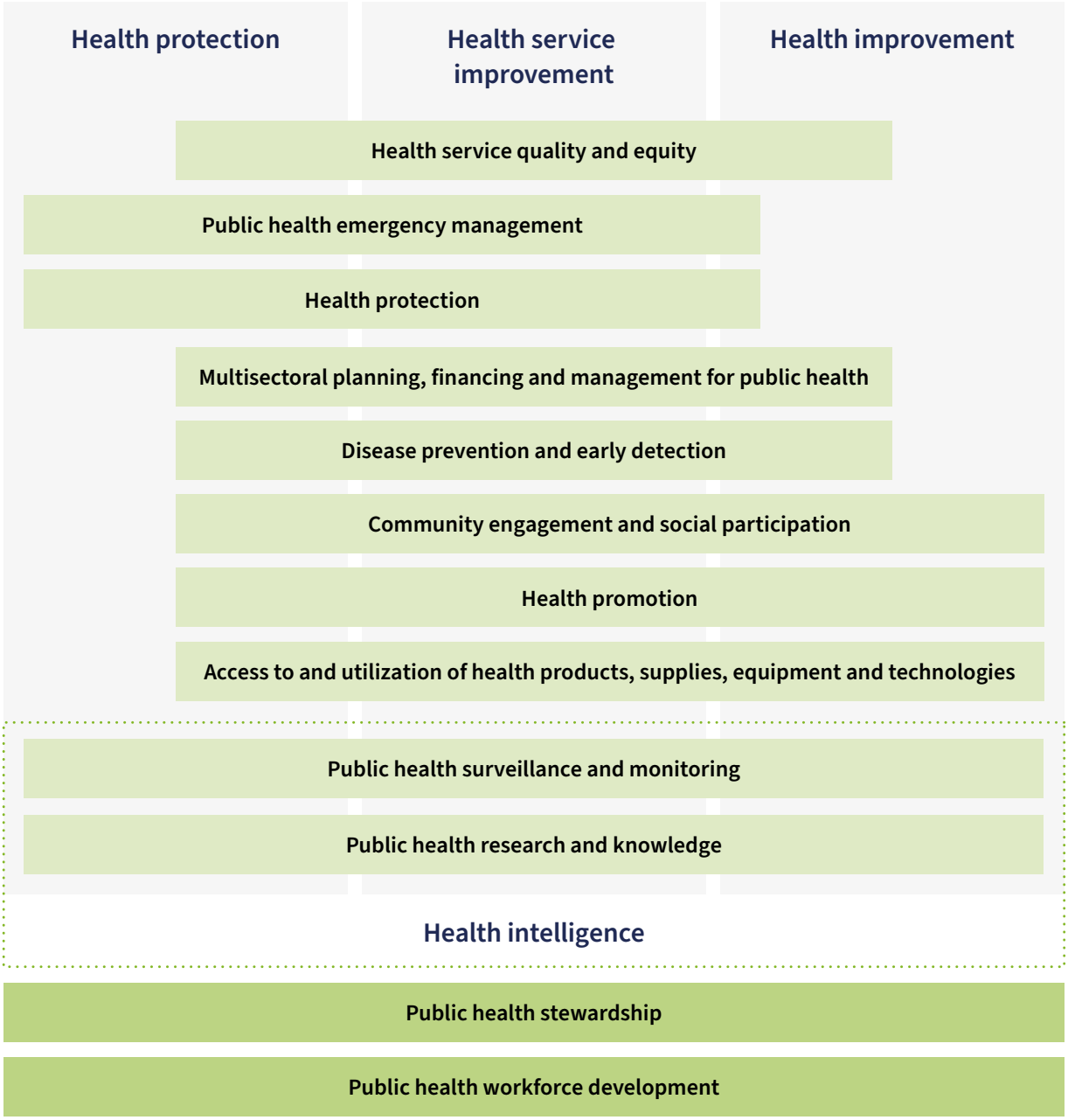
In January 2022, the Minister for Health and Minister of State with responsibility for Public Health in Ireland convened a Public Health Expert Advisory Group to report on strengthening public health capacities broadly, and more specifically to support emergency preparedness and response. A strategic review of public health, informed by the EPHFs and using the approach outlined above, was a key input into this process.

Phase I involved the identification of aims and objectives with the accompanying timelines and resources. The aim was to provide a high-level and strategic overview of the current state and consideration of EPHFs within Ireland to inform national policy for building health system resilience.

Objectives included providing a strategic review of the current delivery of EPHFs, identifying strengths and areas for improvement, and identifying concrete policy options to optimize EPHF delivery. The timeline for delivery was six months, to align with the public health reform process.

Phase II involved the mapping of the EPHFs against the Irish domains of public health practice: health protection, health service improvement, health improvement and health intelligence (Figure 11). Each activity within the EPHF list was reviewed and mapped against these domains of practice, and this common understanding then informed the basis of the analysis. This mapping is illustrative, and a similar mapping process should be undertaken using the conceptualization of public health within the relevant national context.

Figure 11. **Comparison of public health practice in Ireland and EPHFs**



Note: The boxes represent the WHO list of EPHFs released in 2021. The dotted areas represent the domains of public health practice used in Ireland.
Source: WHO (3).

A key questions matrix was then developed, aligned with the thematic areas of policy and planning, inputs and infrastructure, integration and coordination, service delivery, monitoring and evaluation and learning systems. Key documents were identified relating to the delivery of all EPHFs and were reviewed using the key questions matrix. Country contextualization was supported by the identification of health system stressors, by reviewing Ireland's demography and socioeconomic conditions, population disease profile, and health systems and services using publicly available data (Table 7).

Lessons emerging from international experience were identified and reviewed within the Irish context and in conjunction with previous after-action reviews. Findings were then triangulated with key stakeholder interviews. This process was supported by stakeholder mapping (Table 8), whereby each EPHF was mapped against the main organizations responsible for or involved in delivery. Interviews were conducted to ensure that all EPHFs and key intersectoral partners were represented.

Table 7. **Summary of key public health stressors and challenges identified in the Irish setting**

Types	Documents
Demography and socioeconomic conditions	• Population growth expected over next two decades • Increasing elderly population • Increasing migrant communities • Increasing socioeconomic inequity
Population disease profile	• Multimorbidities are the norm rather than the exception • Increasing rates of obesity • High rates of cancer, heart disease and respiratory disease • Increasing mental health issues and substance abuse • Longer-term impact of COVID-19
Health systems and infrastructure	• Limited health information systems and cybersecurity issues • Health workforce shortages and dissatisfaction • Primary care and hospital capacity issues • COVID-19-related disruptions across the health system and services
Population-based health services	• Limited legislation and underinvestment in public health • Emergency and reactive focus of public health services • Limited formal linkages to clinical and multisectoral services

Source: WHO (3).

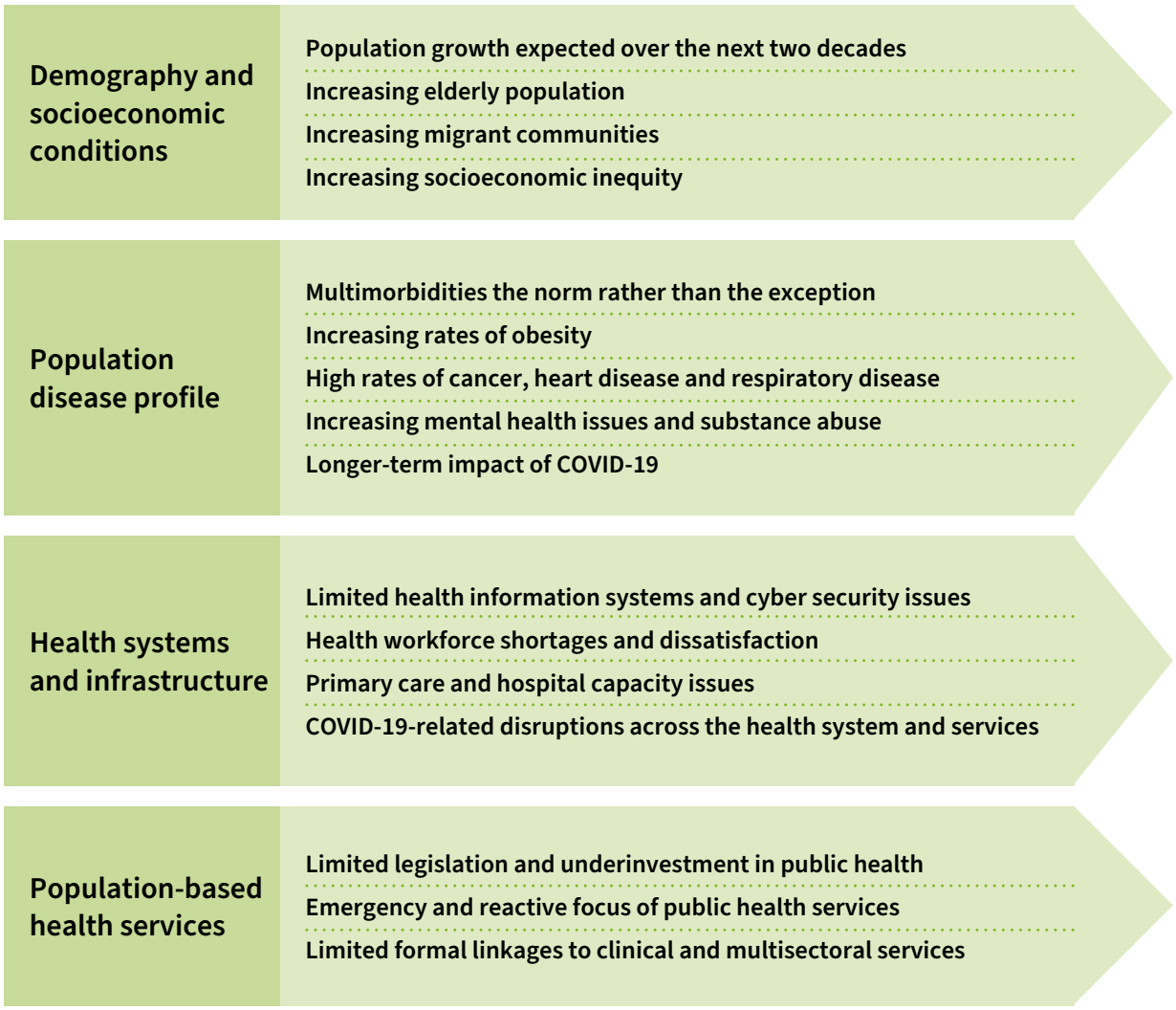
Table 8. **Illustrative example of stakeholder mapping undertaken in Ireland for EPHF 1: public health monitoring and surveillance**

Main organizations involved in delivery
Health Intelligence Unit
Quality and Patient Safety
Health Protection Surveillance Centre
Department of Agriculture, Food and the Marine
Regional Departments of Public Health
Central Statistics Office
Hospital Groups
National Screening Service
National Cancer Registry of Ireland
Health Service Executive
Health Research Board
National Office of Clinical Audit
Mental Health Commission
Department of Health

Source: WHO (3).

Phase III involved the collation of all collected data into five key areas for improvement to optimize the delivery of EPHFs within the context of current and future health system stressors and lessons from COVID-19 (Figure 12). These broad areas were then distilled into actionable policy options to support the optimal delivery of EPHFs in Ireland.

Figure 12. **Summary of recommendations from the strategic review of EPHFs in Ireland**



Source: WHO (3).

Phase IV is currently ongoing and involves the development of a national public health strategy that is comprehensive and coherent with the EPHFs, recognizes the multisectoral nature of health, and leverages existing resources for the delivery of the EPHFs.

Further detail on the application of this approach within Ireland can be found in A *novel approach to utilising the essential public health functions in Ireland's health systems recovery and reform (2)* and *Essential public health functions in Ireland: perspectives to strengthen public health capacities and stewardship (3).*

7. Examples of applications in strengthening public health stewardship, capacities and services

The approach outlined in Chapter 6 is not meant to be prescriptive, but rather to provide a flexible and adaptable approach to strengthening capacities and stewardship for public health in a national context.

The adaptation of the approach relates to the defining of the scope and objectives, and the themes and questions specified within the framework for analysis. Several examples of application in a national context are presented here across broad categories: strengthening institutional structures for the delivery of EPHFs, defining packages of health services in a national context, strengthening the promotive, protective and preventive capacities of health and allied sectors, and developing the workforce for delivering the EPHFs (Figure 13).

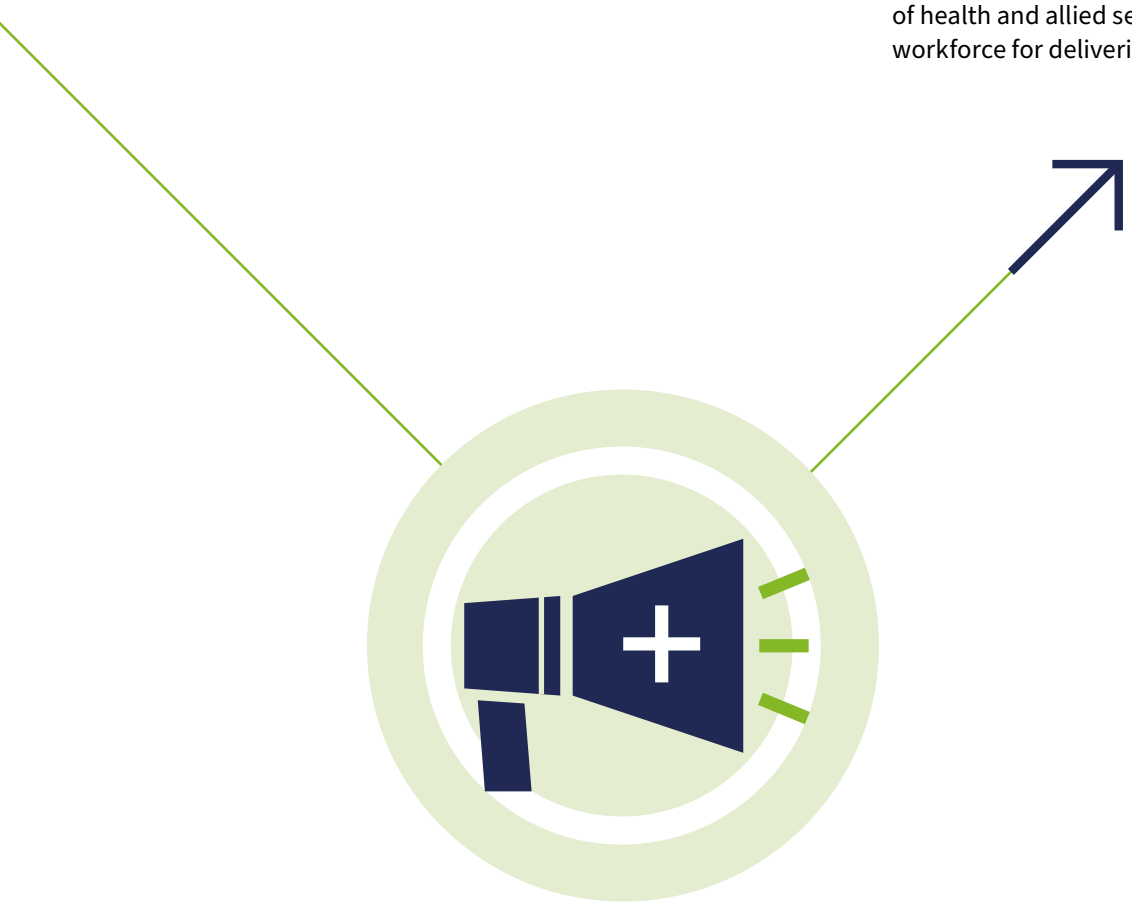
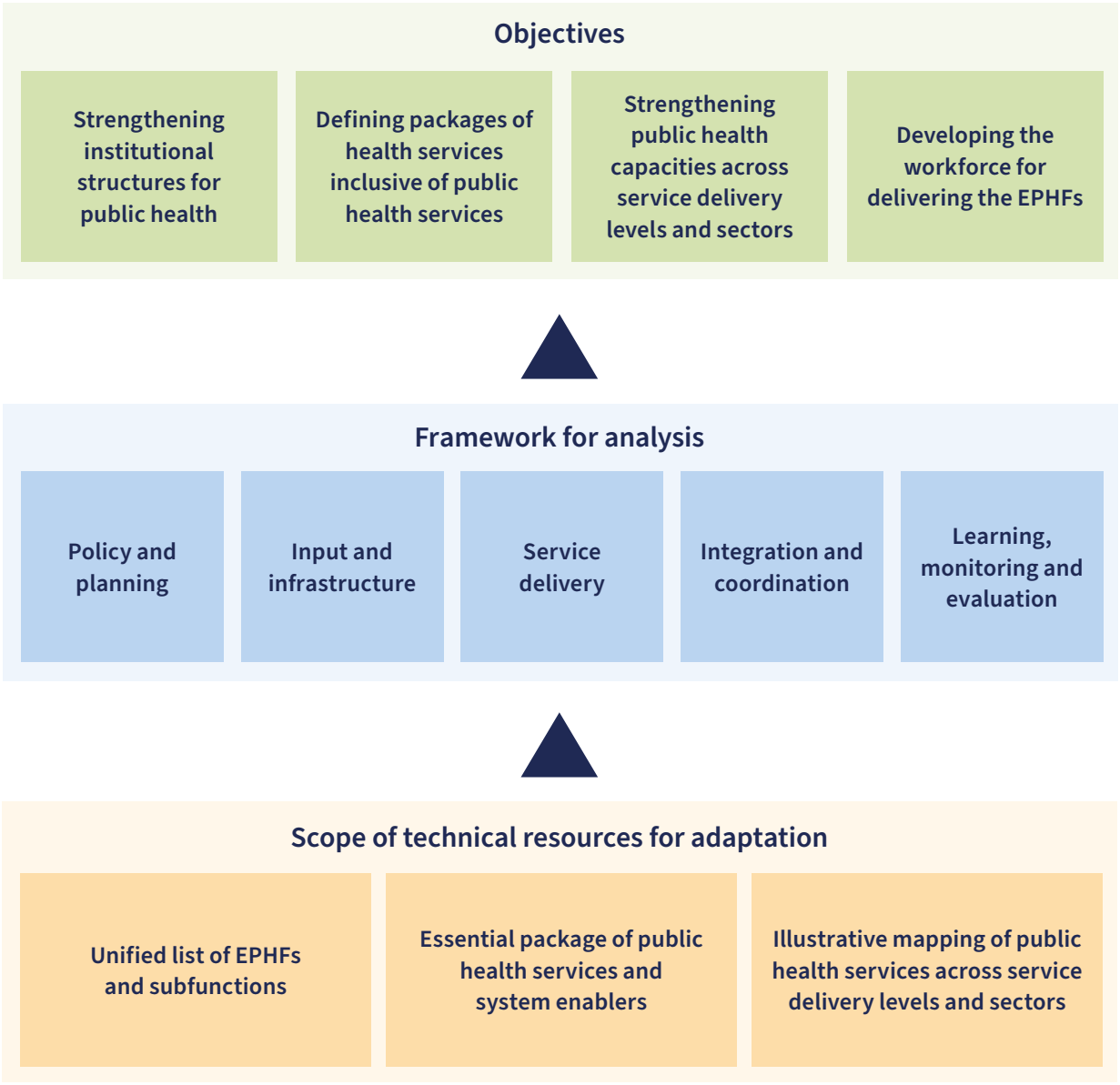


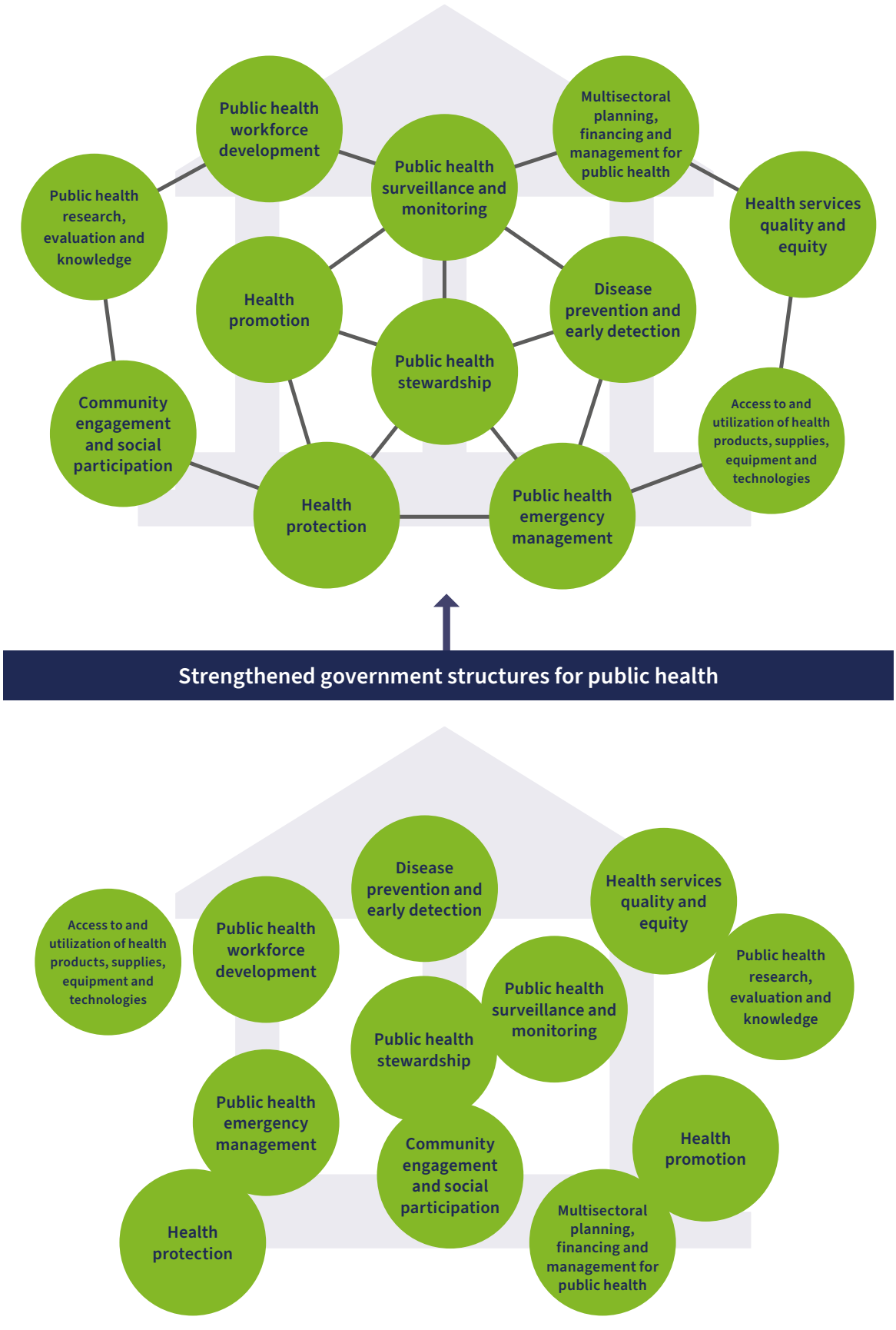
Figure 13. **Illustration of the flexibility of the strategic review**



7.1 Strengthening institutional structures for the delivery of the EPHFs

As the EPHFs are public goods, they require the leadership and coordination of the state in organizing and coordinating public health functions across sectors and administrative levels to ensure their comprehensive delivery. It is important to note that strengthening institutional structures for public health does not necessarily mean bringing all functions or activities under a single line of governance. Strengthening institutional structures ensures that the relationships and coordination between EPHFs, between health service levels and allied sectors, and between decision-making, technical advice and evidence generation are clearly defined and understood. This supports the coordinated and integrated delivery of the EPHFs (Figure 14). The EPHFs provide a common language for the diverse stakeholders involved in delivery to define institutions and structures that support delivery of these activities.

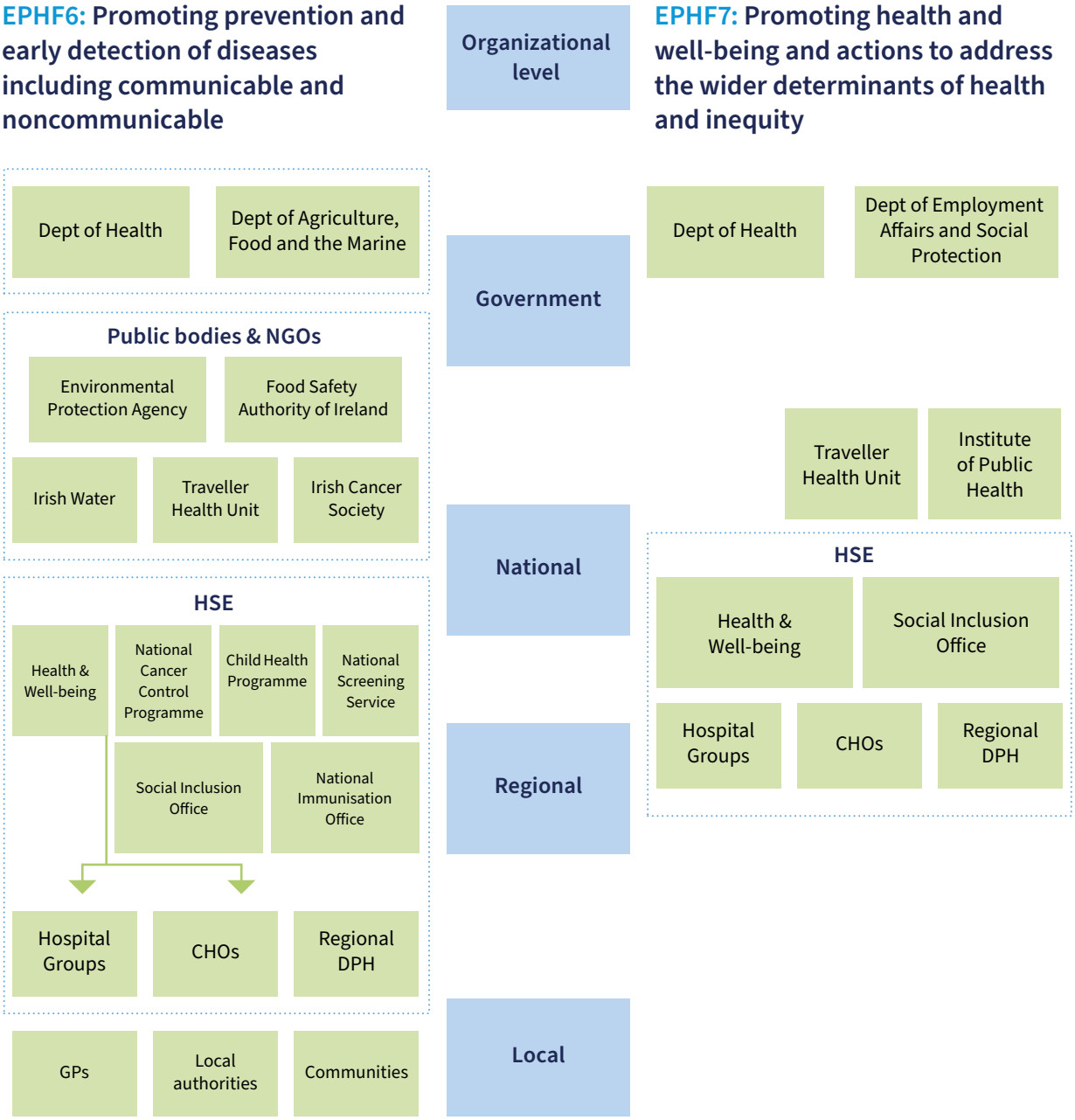
Figure 14. **Illustration of applying EPHFs to understand, define and strengthen government structures to lead, coordinate and deliver EPHFs in a coordinated manner**



Regardless of scope or objectives, the completion of phase II should have brought an understanding of the current status quo with respect to the coordination and delivery of the EPHFs, that is, identifying and mapping the entities leading, coordinating, and delivering the EPHFs and subfunctions at each level (Figure 15); if and how these entities are linked and communicating; and if there are any gaps and overlaps in oversight. The process also supports the understanding of the roles and responsibilities of all stakeholders and their relationships with one another. If the specified objective of the review is to inform the strengthening of stewardship for the EPHFs, this information can be further enhanced through the inclusion of specific key questions when developing the framework for analysis. Recommendations to support strengthening institutional structures should be grounded in the context and political realities of the country and can include:

- the review, reform or adaptation of structures and relationships, including the terms of reference and missions of the agencies working towards public health goals;
- the revision or development of legislation (Box 13), memoranda of understanding or service-level agreements to establish clear lines of communication, collaboration and accountability among these agencies;
- defining or strengthening the role of a national public health institute (Box 14).

Figure 15. **Illustrative structures supporting EPHF 6: Disease prevention and early detection, and EPHF 7: Health promotion, developed in strategic review of public health capacities and stewardship in Ireland**



CHO: community health organization; DPH: Department of Public Health; GP: general practitioner; HSE: Health Service Executive, Ireland.
Source: WHO (3).

Utilizing EPHFs to strengthen government structures for public health stewardship can provide clarity in high-level advocacy for public health, support the coherent planning of public health in response to the country's public health priorities, promote proportionate resource allocation to public health, support the monitoring of public health spending, and foster intrasectoral and multisectoral collaborative delivery of public health functions and services to serve its populations. Stewardship can be further supported by system design that ensures adaptability in response to changing health needs and shifting priorities and building evaluation into policy instruments *(8)*.

Box 13. Kenya National Public Health Institute Bill, 2018

In the wake of the West African outbreaks of Ebola virus disease, Kenya established a National Public Health Institute in 2018. The initiative was underpinned by legislation that outlined the initial structure and functions of the institute. While recognizing the traditional role of national public health institutes in research, surveillance and infectious disease prevention and control, the legislation sought to incorporate a wider public health approach aligned with essential public health functions. The new institute is also tasked with strengthening health information systems to support prevention and control of both communicable and noncommunicable diseases, as well as the development and implementation of disease prevention and control programs.

Source: Government of Kenya (9).

Box 14. Strengthening national public health institutes using EPHFs

There is significant variability in terms of autonomy, relationship to government structures and functions of national public health institutes. Some lead national efforts in disease surveillance, outbreak investigation, research, and policy work for infectious and chronic diseases, while others have a narrower focus on surveillance, laboratory services and applied research. Relationships with government structures also vary significantly: some national public health institutes have more autonomy, independence, visibility and funding, as in the case of the Centers for Disease Control and Prevention in the United States and the Robert Koch Institute in Germany, while others work as part of an in-country network, in partnership with many other public health agencies in the country. Some countries and regions have sought to promote coordination across EPHFs by formally networking existing structures and platforms involved in the delivery of various public health functions *(10, 11)*.

Regardless of its scope and focus, a national public health institute provides a platform for coordinating the delivery of public health activities, either through a single agency or through a closely networked group of agencies *(12)*. The EPHFs *(1)* provide a comprehensive approach to operationalizing public health by articulating and defining the fundamental activities that underpin effective public health actions in a national context. Using the EPHFs to define the operational scope and functions of a national public health institute ensures the comprehensive operationalization of public health, enabling multisectoral action and accountability for health and well-being with a focus on equity.

Due to significant variations in political and health systems between countries, there is no single ideal model of public health stewardship. There are, however, several key aspects for consideration:

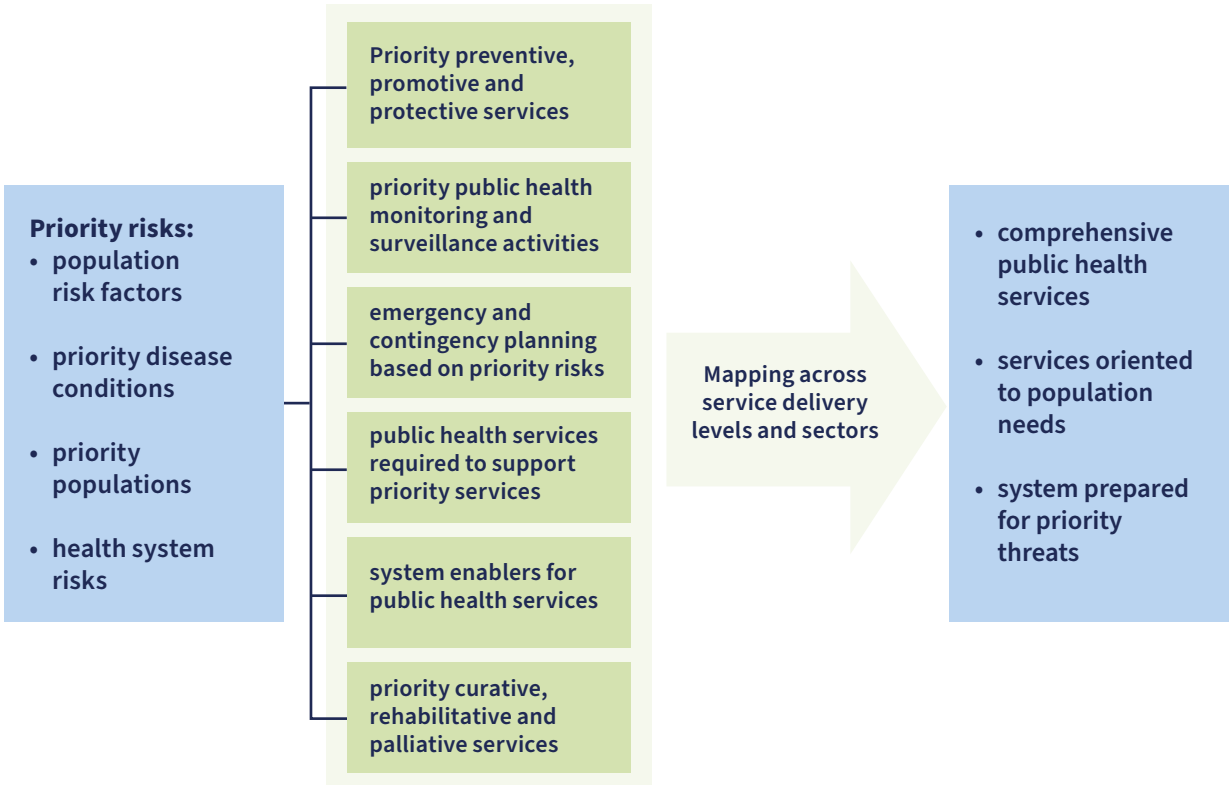
- **Mandate**. National leadership and coordination to deliver EPHFs often requires a clear mandate and authority underpinned by legislation. The EPHFs can provide a strong reference to develop such laws *(13)*.
- **Placement**. The coordinating entity must be strategically placed, with sufficient prominence and visibility to enable effective intersectoral public health action. A degree of autonomy or independence from ministries of health and other government agencies has also been highlighted as advantageous *(14)*.
- **Resourcing**. National public health institutes must be adequately and sustainably resourced to effectively deliver their defined mandate. This refers to effective financing for institutional and operational capacities, as well as an adequate and appropriately trained workforce.

7.2 Defining packages of health services in a national context

While universal health coverage involves the delivery of the full range of services required to meet health needs, many countries and health systems remain primarily focused on the provision of individual-based, disease-specific services *(15)*. The proposed list of essential public health services and system enablers provided within the package can be used to ensure the comprehensive delivery of public health services within a country, to develop, update, or expand the essential package of health services or equivalent, or to integrate and strengthen the preventive, promotive and protective capacities within health services and allied sectors. The use of the list of public health services in planning essential packages of health services supports the orientation of individual and curative services to population need, and ensures a focus on prevention, health promotion and protection alongside the development of clinical services for the diagnosis and treatment of priority conditions. This helps to make efficient and effective use of available resources, maximizing health gains within given financial constraints.

If the strategic review of EPHFs is primarily intended to focus on the delivery of public health services within a national context, the essential package of public health services and system enablers should form the basis of the comparison process when developing a framework for analysis in phase II. This will then inform the development of the key questions in order to ensure the recommendations are aligned with the objectives. Country contextualization is particularly important in determining the appropriate package of essential public health services, as priority services should be aligned with population health needs and health system risks (Figure 16). This information can be drawn from existing data sources, including population health needs assessment or equivalent, readily available population demographic and profiling data, and health system and service data. Risk profiling or equivalent risk assessments that quantify and prioritize risks within a given setting can identify the priority health system risks and health system risk assessments (Box 15).

Figure 16. **Using available population and health system data to inform development of public health services**



Box 15. Population health needs assessment and risk profiling

Performing a population health needs assessment (PHNA) and health system risk assessment are key public health services. PHNA is the systematic process of identifying the needs of a defined population, prioritizing those needs, and identifying and reviewing the solutions available to address them. Underpinned by the principle of equity, PHNA defines needs broadly, including not only health conditions but also risk factors and socioeconomic status. Identifying the greatest needs ensures that resources are targeted where they can have the greatest impact. Because PHNA starts with population need rather than services, the approach enables a wider view of the problem and solutions, including those that lie beyond the health sector. In this way, PHNA can support multisectoral accountability for health and ensure the leveraging of whole-of-society resources to promote and protect health and well-being. PHNA also provides an opportunity to enable community participation in service planning and resource allocation, promoting access and equity.

Risk profiling is an evidence-based approach to identifying, analyzing and prioritizing health risks in order to support prevention, mitigation and control efforts. The process involves identifying and prioritizing risks to inform multihazard emergency response and contingency planning. In this way, preparedness for and response to likely risks can be optimized, thus reducing risk and building resilience. The process involves horizon scanning, identifying and quantifying likely hazards, assessing vulnerability and coping capacities, and itemizing the resources available to manage the hazard, and using this information to prioritize risks for action. As for PHNA, risk profiling is ideally a multisectoral effort.

Within the current global practice, these processes are often siloed and ad hoc, and remain somewhat disconnected from institutional processes, undermining their utility in orienting health systems to real population need. Within the context of EPHFs, population need can be considered to include risks arising from infectious agents and other hazards identified through emergency-focused risk prioritization exercises, but not many countries have incorporated these risks routinely in population health needs assessment. This may be due, at least in part, to the lack of a comprehensive tool supporting an integrated process that ties them together.

When population health needs assessment and risk profiling are integrated and institutionalized in the prioritization, planning and resource allocation processes within health and allied sectors, including emergency preparedness and response, they can reduce fragmentation and promote integration while orienting systems for health towards population need and priority risks. This ensures resources are focused on population need, including priority risks, within a national context. Strongly linking integrated PHNA and risk profiling to institutional planning processes also ensures a level of transparency in prioritization that promotes a greater sense of trust and solidarity.

The process outlined enables the identification of priority promotive, protective and preventive services and priority services for emergency and contingency planning (Figure 16), while ensuring that the additional public health services required to support their delivery, such as public health monitoring and surveillance, are in place. Following the identification and prioritization of services, system enablers should be reviewed to ensure that all required enablers are in place to support the delivery of the services identified above. This process can support:

- identification of priority preventive and promotive services to meet population need;
- identification of priority surveillance and monitoring activities;
- prioritization of emergency preparedness and response activities;
- identification of priority curative, rehabilitative and palliative health services to meet population need;
- development or update of an essential package of health services or equivalent, considering both clinical care and public health services, in line with identified national priorities;
- integration or reintegration of disease-specific services within horizontal service delivery platforms, as appropriate.

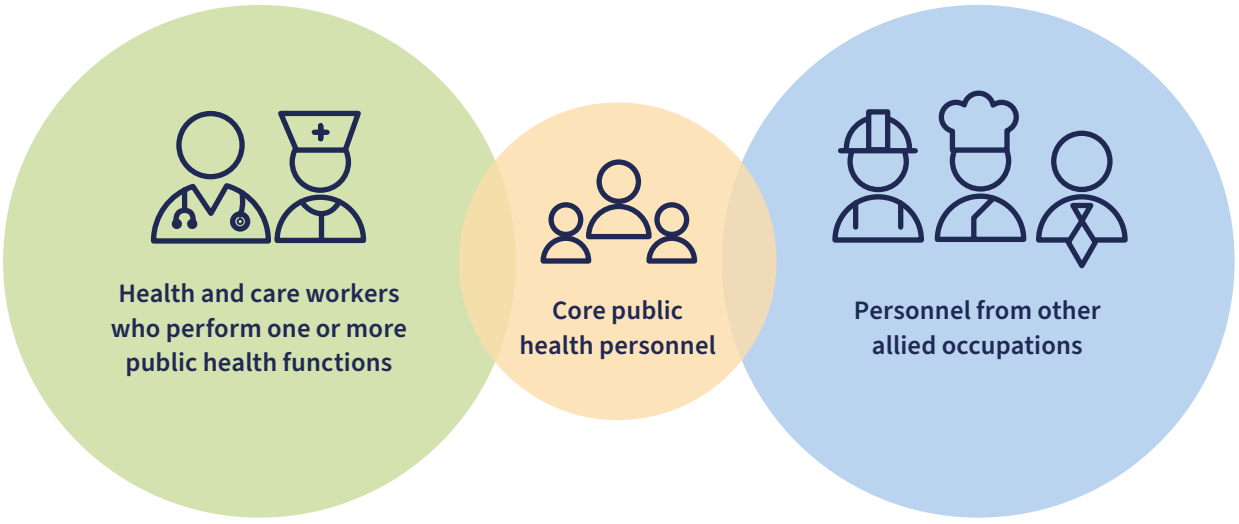
7.3 Strengthening the promotive, protective and preventive capacities of health and allied sectors

Once a bundle of public health services and system enablers has been identified, services can be mapped to all relevant delivery settings using the illustrative mapping tool (see Table 6 above). This can inform the strengthening of health services and allied sectors in the delivery of EPHFs by recognizing their role in the delivery of public health services, thus ensuring that promotion and prevention are incorporated into models of disease care, and that the role of primary care in the delivery of emergency response activities is recognized and strengthened. Consequently, a more integrated approach to planning is enabled, with greater alignment of resources and enhanced multisectoral accountability for public health goals. This simple exercise can help bring whole-of-government and whole-of-society approaches to public health by recognizing and developing the role of all stakeholders in the delivery of public health services.

7.4 Strengthening the workforce for delivering EPHFs

The development of the wider public health workforce is critical to implementing EPHFs, though its role in delivering public health functions has been increasingly diluted and unrecognized *(16–19)*. EPHFs, subfunctions and public health services can be applied to identify the breadth of skills and work responsibilities necessary to fully deliver the EPHFs for the public health workforce as a whole, identifying professions and workers who have a role in implementing public health functions and services, and positioning this workforce as the foundation for developing the necessary competency-based education and training to effectively deliver the EPHFs (Figure 17).

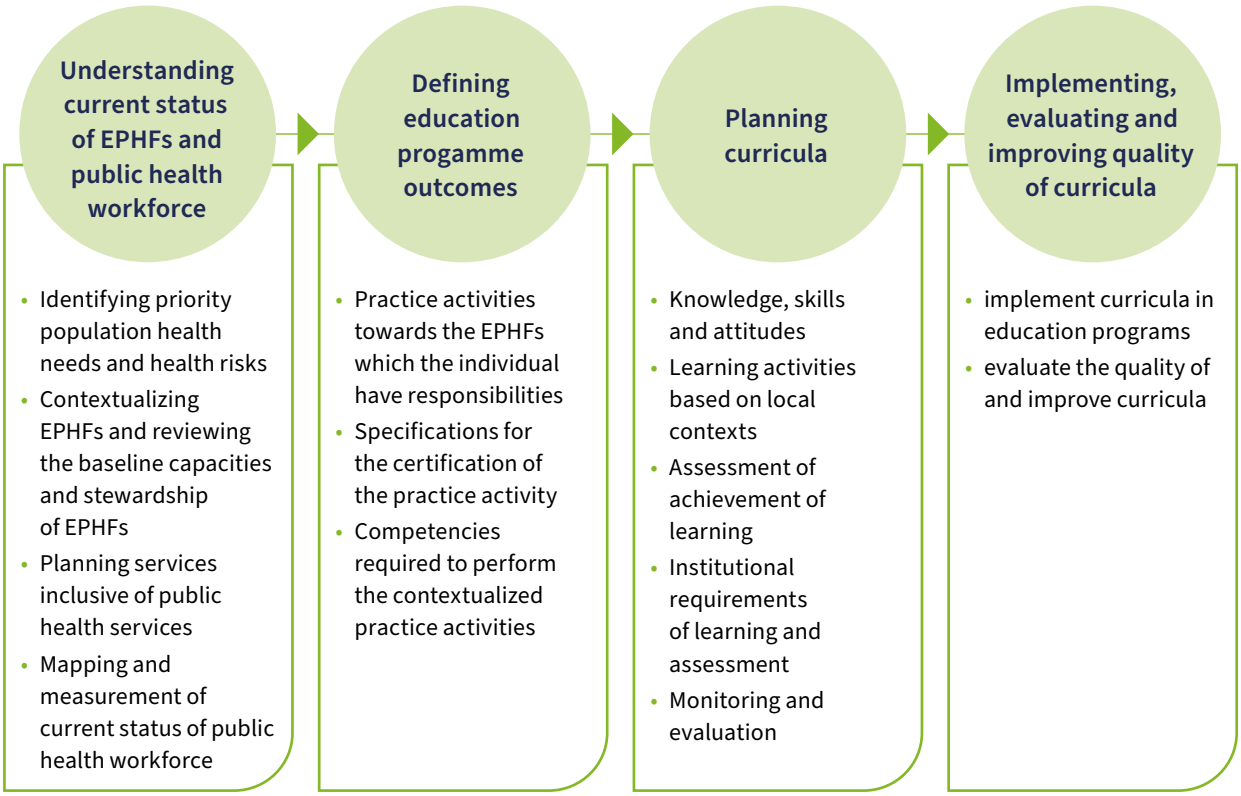
Figure 17. **Composition of public health workforce**



Source: WHO (16).

WHO is working with partners to develop a public health and emergency workforce competency and outcomes framework, as well as a measurement framework, for countries to use in a stepwise fashion to strengthen competency-based education and training programs for the public health workforce (Figure 18). Countries can start with understanding the current status of EPHFs, including the public health workforce. They can then define education program outcomes based on contextualized public health functions and services (including practice activities and competencies), and then work backwards to planning curricula, including identifying the relevant knowledge, skills, attitudes and competencies. This approach can be utilized across the lifelong learning continuum, such as pre-service and in-service training and specialization. The EPHFs can also be utilized in mapping and measuring the workforce in health and allied sectors that undertake public health activities.

Figure 18. **Illustration of a stepwise approach to use EPHFs to strengthen competency-based education programs for public health workforce development**



References: Part III

1. 21st century health challenges: can the essential public health functions make a difference? discussion paper. Geneva: World Health Organization; 2021 (https://apps.who.int/iris/handle/10665/351510, accessed 11 August 2023).
2. McNicholas T, Hendrick L, McDarby G, Mustafa S, Zhang Y, Saikat S et al. A novel approach to utilising the essential public health functions in Ireland's health systems recovery and reform. Front Public Health. 2022;11. doi:10.3389/fpubh.2023.1074356.
3. Essential public health functions in Ireland: perspectives to strengthen public health capacities and stewardship. Geneva: World Health Organization; 2023.
4. Assessment of essential public health functions in countries of the Eastern Mediterranean Region: assessment tool. Cairo: World Health Organization Regional Office for the Eastern Mediterranean; 2017 (https://apps.who.int/iris/handle/10665/254383, accessed 11 August 2023).
5. Self-assessment tool for the evaluation of essential public health operations in the WHO European Region. Copenhagen: World Health Organization Regional Office for Europe; 2015 (https://apps.who.int/iris/handle/10665/344398, accessed 11 August 2023).
6. Zhang Y, McDarby G, Seifeldin R, Mustafa S, Dalil S, Schmets G et al. Towards applying the essential public health functions for building health systems resilience: a renewed list and key enablers for operationalization. Front Public Health. 2022;10:1107192. doi:10.3389/fpubh.2022.1107192.
7. World Health Organization, United Nations Children's Fund. Operational framework for primary health care: transforming vision into action. Geneva: World Health Organization; 2020 (https://apps.who.int/iris/handle/10665/337641, accessed 7 August 2023).
8. Preliminary review of institutional models for delivering essential public health operations in Europe. Copenhagen: World Health Organization Regional Office for Europe; 2012.
9. Kenya National Public Health Institute Order, 2021. Government of Kenya: National Public Health Institute; 2021 (https://blog.cema.africa/national-public-health-institute-nphi/, accessed 29 August 2023).
10. A vision to transform Canada's public health system. Ottawa: Public Health Agency of Canada; 2021 (https://www.canada.ca/content/dam/phac-aspc/documents/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/state-public-health-canada-2021/cpho-report-eng.pdf, accessed 29 August 2023).
11. Strengthening the role of regional public health institutions to improve cross-border disease surveillance and response in Eastern and Southern Africa. Washington (DC): World Bank; 2021 (https://www.worldbank.org/en/news/press-release/2021/03/18/strengthening-the-role-of-regional-public-health-institutions-to-improve-cross-border-disease-surveillance-and-response, accessed 29 August 2023).
12. Jakab Z, Selbie D, Squires N, Mustafa S, Saikat S. Building the evidence base for global health policy: the need to strengthen institutional networks, geographical representation and global collaboration. BMJ Glob Health. 2021;6. doi:10.1136/bmjgh-2021-006852.

13. Best practices series: legal mandates and governance for NPHIs. Paris: International Association of National Public Health Institutes; 2017 (https://www.ianphi.org/_includes/documents/sections/tools-resources/best-practices-case-studies/legislation-bp-guidance-document-formatted_050918.pdf, accessed 29 August 2023).

14. Myhre SL, French SD, Bergh A. National public health institutes: a scoping review. Glob Public Health. 2022;17:1055–72. doi:10.1080/17441692.2021.1910966.

15. George M. Being fair in universal health coverage: prioritize public health services for low- and middle-income countries. Am J Public Health. 2016;106:830–1. doi:10.2105/ajph.2016.303145.

16. 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. Geneva: World Health Organization; 2022 (https://www.who.int/publications/i/item/9789240050402, accessed 7 August 2023).

17. Bjegovic-Mikanovic V, Czabanowska K, Flahault A, Otok R, Shortell S, Wisbaum W et al. Addressing needs in the public health workforce in Europe. Copenhagen: World Health Organization Regional Office for Europe; 2014.

18. Bjegovic-Mikanovic V, Foldspang A, Jakubowski E, Müller-Nordhorn J, Otok R, Stjernberg L. Developing the public health workforce. Eurohealth. 2015;21:24–7.

19. WHO-ASPHER competency framework for the public health workforce in the European Region. Copenhagen: World Health Organization Regional Office for Europe; 2020.

IV

Conclusion

8. Conclusion

Public health emergencies such as COVID-19 demonstrate that health is at the heart of socioeconomic prosperity. They present a window of opportunity to do things differently, and to invest in public health capacities in support of universal health coverage, health security and healthier populations. WHO's position paper on health system recovery from COVID-19 and other public health events recommended investing in essential public health and building strong primary health care for the health system.

This document presents a practical and affordable approach to support this; it contains technical resources, including a unified list of 12 EPHFs and their subfunctions, and a package of public health services and system enablers accompanied by simple, practical approaches to their implementation. This supports addressing the weaknesses in public health capacities that once again have left countries and communities vulnerable.

In the face of the growing number and complexity of public health challenges and fiscal constraints, the EPHFs provide an affordable means of strengthening and reforming health systems to enable them to meet population health needs in all contexts – both in normalcy and emergencies – together with the efforts of allied sectors.

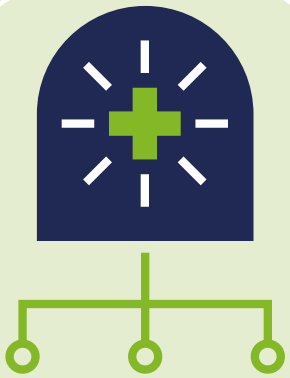
Lessons from COVID-19 and other public health challenges continue to highlight weaknesses and gaps in public health capacities and stewardship globally. The lack of focus and investment in public health is attributable, at least in part, to the lack of an explicit, coherent and comprehensive approach to public health planning. The essential public health functions represent such an approach to operationalizing public health. Applying EPHFs supports a more affordable means to achieve health-related goals by developing a more integrated approach to planning – one that harnesses synergies and aligns investments in health and allied sectors to support public health objectives, including universal health coverage, health security, improved population health and well-being, disease-specific goals, and other health-related SDG targets. WHO's position paper on health system recovery from COVID-19 and other public health events made seven policy recommendations towards building resilient health systems. These included investing in essential public health functions, including those needed for all-hazards emergency risk management and building a strong primary health care foundation for the health system. This document constitutes a practical approach to implementing these recommendations.

The document presents technical resources consisting of a unified list of 12 essential public health functions, 48 subfunctions and a package of 20 essential public health services and 12 system enablers, each representing the depth and breadth of public health in line with modern understanding. It also presents practical approaches to applying these technical resources in a national context, in support of determining priorities and addressing the weaknesses in public health capacities in alignment with the objectives defined by the government, for example, strengthening stewardship and coordination, integrating public health services within health and allied sectors, orienting health and allied sectors towards health, and development of the public health workforce. Adaptation and application to countries in various resource settings and development stages necessitates public health leadership and skilled expertise and support; this in turn requires political commitment that should be sustained, and financing capacity that should be optimally utilized.

The COVID-19 pandemic has demonstrated what we have failed to learn from public health emergencies in the past – health is at the heart of social and economic prosperity. Socioeconomic and health system recovery provides a valuable but narrow opportunity to learn this lesson and harness political and social momentum to do things differently. The EPHFs support a reimagining of health systems, reformulating them as systems that are primary health care based and public health oriented. This can ensure that the limited resources available will create systems that not only respond to the challenges presented by climate change, conflicts, emerging infectious threats, and rising rates of antimicrobial resistance and noncommunicable disease, but also have the capacities and reach to keep the most vulnerable among us well. In the context of the growing number and complexity of public health challenges and fiscal constraints, applying EPHFs provides the means for governments and other global and national stakeholders to strengthen and reform health systems, leveraging multisectoral efforts to meet population need, while ensuring the greatest benefit within available resources.

V

Annexes



Annex 1. Unpacking the essential public health functions

This annex describes the 12 essential public health functions in detail, including the description of each EPHF further delineated into subfunctions. These are then divided into public health services and system enablers that are key to implementing the activity from a public health point of view. Examples are provided to support better understanding of public health services and system enablers. The unpacking is based on a review of literature and consultation with experts. Further detailed description of the methodology is found in Annexes 2, 3 and 4. Figure A1.1 provides an illustration of the structure of unpacking essential public health functions.

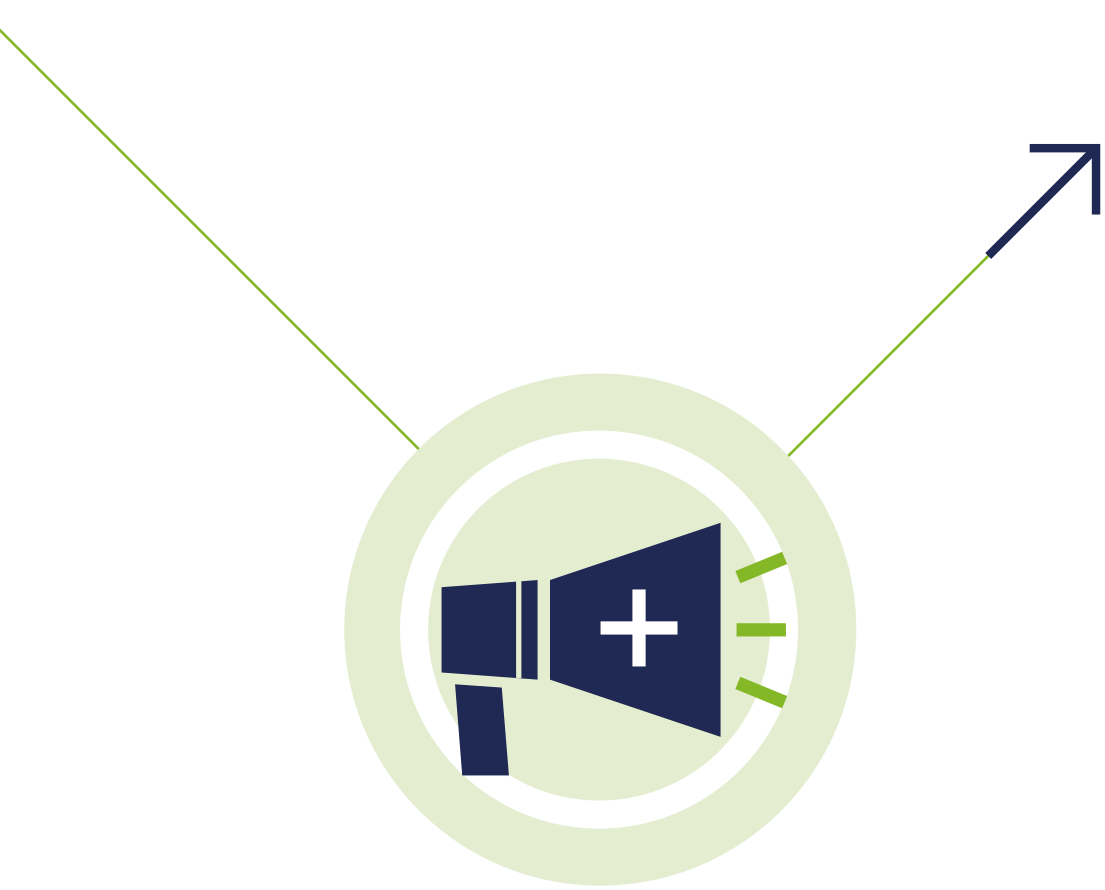
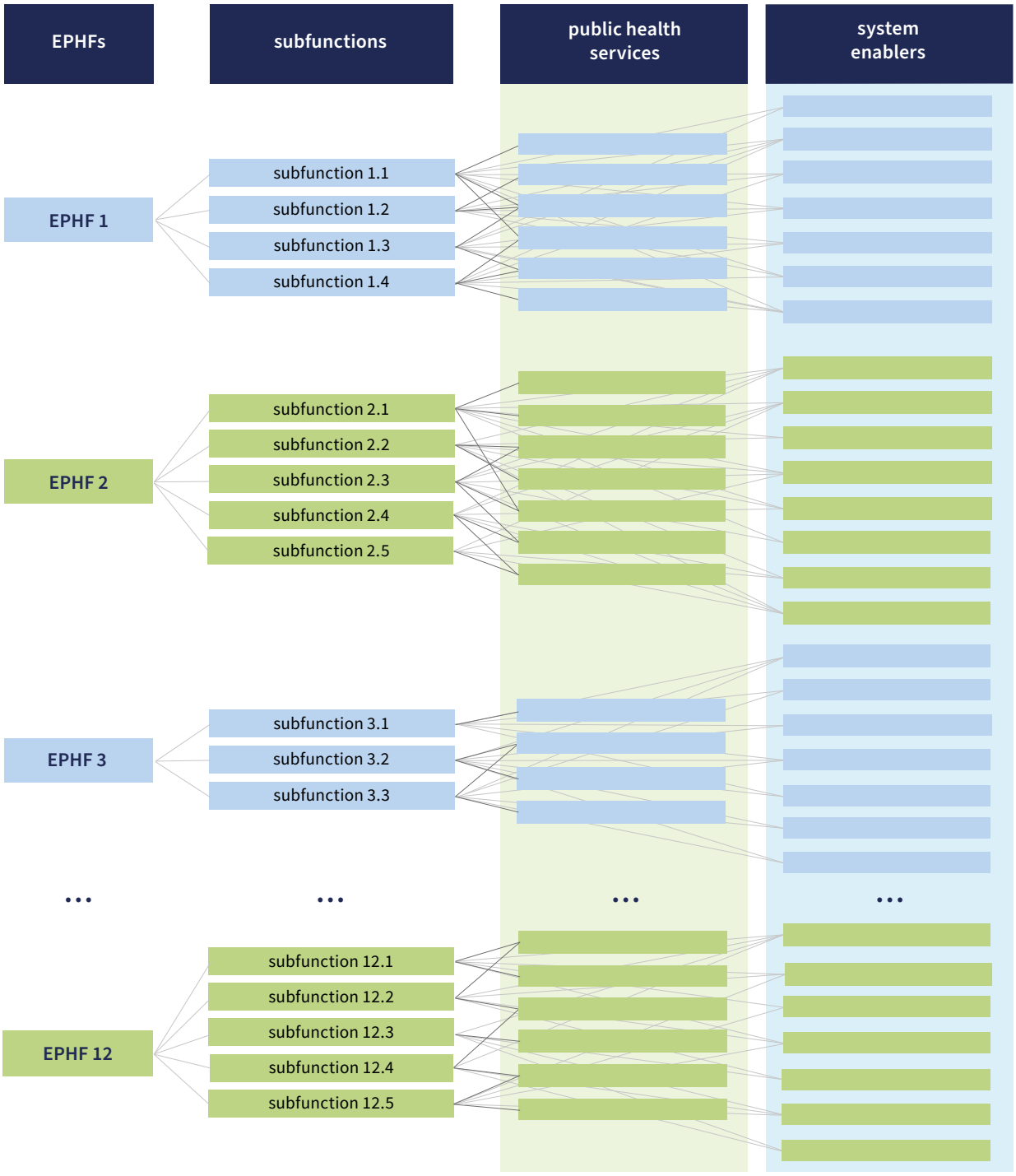


Figure A1.1 **Illustration of the structure of unpacking EPHFs, subfunctions, public health services and system enablers**



EPHF 1

Public health surveillance and monitoring: Monitoring and surveillance of population health status, risk, protective and promotive factors, threats to health, and health system performance and service utilization

Description

This activity involves the regular collection, analysis and interpretation of data relating to population health in support of monitoring, surveillance, planning and evaluation. This includes population health status (including incidence and prevalence of diseases, health conditions and behaviors, morbidity and mortality, health determinants and disease profiles), equity, protection and risk factors, determinants of health, health services and system utilization, health workforce performance and distribution and performance of population-based and individual-based health interventions, and potential hazards to health.

Subfunctions include:

- **Subfunction 1.1:** Planning for public health monitoring and surveillance
- **Subfunction 1.2:** Routine and systematic collection of public health data
- **Subfunction 1.3:** Analyzing and interpreting available public health data
- **Subfunction 1.4:** Communicating public health data, information and evidence with key stakeholders, including communities

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance and monitoring of public health-related data, including population health status, health-related behaviors, disease incidence and prevalence, and health risks and hazards	• Population surveillance of smoking prevalence • Infectious disease surveillance, including notifiable and epidemic-prone diseases, pathogens with bioterrorism potential, and drug-resistant pathogens • Environmental surveillance of air, soil, water, and other media for hazards such as toxic substance and pathogens • Health equity audits
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	• Health system performance assessment • Patient satisfaction surveys • Risk and vulnerability assessment of health facilities
3. Periodic risk profiling at the facility or organization, geographical region, or national level	• Multisectoral risk profiling exercise to identify and classify priority risks at the national level • Profiling health and safety risks for large, medium and small businesses
4. Population health needs assessment at national, regional and local levels	• Community health needs assessment • General practitioner-based health needs assessment
5. Synthesis of available evidence to communicate evidence and inform decision-making at all levels	• Analysis of health and health system performance indicators and data to support health sector planning • Development of information sheets and policy briefs to inform planning and policy
6. Communication between stakeholders for the timely exchange of information	• Dissemination of annual health statistical reports on official website and social media to reach key stakeholders, including the public • National health accounts reporting • Report on SDGs

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1 Legal, regulatory or policy frameworks for collecting, storing, linking and sharing public health-related information, including information on population health, health risks, hazards, and health system and service performance and utilization	• 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 • Memoranda of understanding and service-level agreements that support data sharing across organizations and data repositories
2 Government structures with clearly defined mandates in routine and systematic collection of data	• National health information analytical center tasked to collect and collate routine data from public and private health facilities (Armenia)
3 Integrated information systems that support the monitoring and evaluation of population health and health systems	• Functional civil registration system to record vital statistics for the population • Health management information system administering and communicating data from health facility to district, regional and national administrative levels • Functional disease registries in compliance with the International Classification of Diseases • Integrated national surveillance systems linked to the event-based surveillance and participatory surveillance to intensify active surveillance
4. Mechanisms supporting interoperability and data sharing among key stakeholders within the health sector and allied sectors, including communities	• Electronic exchange of immunization data from health centers' electronic health record systems to state immunization registry • Integrated disease surveillance platforms linking decentralized surveillance activities at national, subnational and local levels
5. Adequate and competent workforce for administration of public health information	• Qualification and training of health and care workforce to collect and interpret public health data • Including administration, interpretation and communication of data in education and training curricula

EPHF 2

Public health emergency management: Managing public health emergencies for international and national health security

Description

This activity covers the management and coordination of public health emergencies through intrasectoral and multisectoral efforts. It emphasizes a series of closely interrelated measures – comprehensive emergency management that generally includes the prediction and anticipation of risks, forecasting, planning and preparedness, prevention, control and mitigation, early identification, notification, reporting, response, the maintenance and restoration of essential health services, and recovery for public health emergencies originating from all hazard events. It also involves the development and utilization of capacities for public health emergency management as well as the assessment of the functioning of these capacities.

Subfunctions include:

- **Subfunction 2.1:** Monitoring and analyzing 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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of public health-related data, including population health status, health-related behaviors, disease incidence and prevalence, and hazards and threats	• Periodic risk profiling and mapping and vulnerability assessment at national, regional and local levels, with identification and prioritization of health risks • Developing and incorporating technical guidance for event-based surveillance risks, for example, early warning and response activities • Monitoring of antimicrobial resistance and other national, regional or global high-priority health risks
2. Ongoing and systematic monitoring and evaluation of health systems, services, interventions and frameworks, including health system performance, the health workforce, health service utilization and user satisfaction, and health system threats and vulnerabilities	• Monitoring the continuity and functionality of essential health services during health emergencies • Monitoring and reporting on compliance with IHR (2005) • Implementing mechanisms of health workforce protection, for example safety, security, and mental health and psychosocial support during events • Incorporating information and knowledge management systems with disaggregated data • Incorporating monitoring frameworks for ethics and principles
3. Emergency and contingency planning for public health emergencies using an all-hazards approach with a view to recovery	• Development and maintenance of national and subnational multihazard emergency response and recovery plans, for example national health emergency response operations plan as well as threat-specific plans • Regular update of national multisectoral, all-hazards emergency preparedness and response activities and supporting policies and procedures with dedicated financial and human resources, including functional emergency operations centers • Health service continuity planning • Simulation exercises and evaluation measures to inform all-hazards plans and regular training of staff • Stockpiling and provision of medical countermeasures for identified priority risks • Identifying relevant multisectoral partners for contingency measures that align with roles and responsibilities
4. Development of coherent, resourced national action plans for preparedness, response and resilience	• Assessment and review of national preparedness capacities, capabilities and risk assessments • Development of a prioritized, costed action plan, for example, five-year national action plans for health security or one- to two-year operational national action plans for health security • Development of technical and financial resource mobilization plans, including funding proposals • Implementing, monitoring and updating the plan based on changing capabilities and risks

Public health services	Examples
5. Incident response actions, including situation assessment and response, and supporting the maintenance of essential health services and systems	• Risk reduction based on risk profiling and vulnerability assessment • Outbreak, cluster and incident investigation and response • Rapid response team capacity, with resources for surging additional staff and funds • Engagement with rapid response technical and operational partners, including emergency medical teams, health cluster, Global Outbreak Alert and Response Network (GOARN) • Development and implementation of mechanisms for coordinated emergency response, aligned with regional and global frameworks • Implementation of appropriate policies and standard operating procedures to ensure the continuous delivery of essential health services • Conducting rapid health needs assessment during emergencies, and carrying out regular updates • Capacity-building and engagement of communities in risk, vulnerability and capacity assessment, response planning, and testing of plans, for example through simulation exercises • Mechanisms for surge capacity at national, subnational, local and community levels for readiness and response to public health emergencies
6. Communication between stakeholders at all levels that ensures the timely exchange of appropriate and accessible information	• Developing intersectoral risk communication to communicate public health threats transparently • Ensuring communications and risk management policies and protocols are in place, for example, linking communities to subnational and national public messaging • Consulting relevant stakeholders for engagement in health emergency and disaster risk management whole-of-society planning and response • Rapid sharing of information on potential public health events through international surveillance networks, and where appropriate through IHR channels and with the public
7. Synthesis of available evidence to support evidence-informed decision-making at all levels	• Operational reviews, including incorporation of intra-action and after-action reviews into clear, tailored guidance for relevant decision-making levels • Development of regular situational updates with monitoring and evaluation frameworks • Development of mechanisms to link review findings to evidence, thus informing decision-making and policy development

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Legal, regulatory and ethical frameworks with and across sectors that support measures	• National public health laws and legislation meeting the requirements of IHR (2005) and other health security frameworks • Clearly defined legal powers and enforcement mechanisms for public health legislation • Public health emergency acts that address relevant areas, for example, travel restrictions, quarantine, isolation, physical distancing and closure of places of assembly, and ensuring delivery of essential services to the population, including people with higher levels of vulnerability and needs • Legal frameworks reviewed, amended and established supporting information sharing (national and international) • Evidence and analytics for health security unit functions and services aligning with universal health coverage aims, the SDGs, and the Sendai Framework for Disaster Risk Reduction 2015–2030 • Multisectoral and whole-of-society coordination mechanisms
2. Clear institutional and governance arrangements to support and align emergency management efforts at national, subnational and local levels	• Inter-organizational agreements, for example memoranda of understanding, and policy and legislative development • Development of emergency response framework with aligned approaches to emergency management within an incident management system • Engagement and participation of key stakeholders across all relevant sectors, with high-level political leadership • Mechanisms to activate emergency procedures and public health emergency operations centre, where appropriate • Emergency management committee with the participation of key stakeholders
3. Mechanisms that support an integrated and multisectoral approach to emergency planning and the allocation of resources in emergencies	• Multisectoral mechanisms for risk monitoring and reduction (for example, zoonosis and the animal–human interface) • All-hazards emergency risk communication function integrated into national action plan for health security • Public health laboratory network • Joint external evaluation involving stakeholders in health and allied sectors • National action plan for health security • National health emergency response operations plan
4. Mechanisms that enable effective participation of communities and social actors (including civil society) in planning, implementation and monitoring and evaluation of public health activities, including emergency response	• Public consultation process on health policies, plans and strategies • Healthy Ireland forum (Ireland) • Citizens' assembly on the eighth amendment to the Constitution (rights of the unborn child) (Ireland) • Community participation in community-based surveillance and early warning systems • Agreements with community groups, civil society organizations and networks (for example, volunteer groups, community welfare groups, students, teachers, indigenous peoples, ethnic groups, faith groups, health networks and community service organizations)

Public health system enablers	Examples
5. Adequate and competent public health workforce capacity to support public health emergency management	• Focal points have sufficient capacity to comply with obligations for notification, consultation, verification and information exchange with relevant stakeholders • Training primary health care workforce for health emergency and disaster preparedness and response, including surveillance, risk assessment, risk control and emergency response • Field epidemiology training programs • Surge deployment, roster of available technical specialists to advise in specific situations • Including competencies of evaluating public health information and appropriately responding to identified risks in public health workforce education and training curricula
6. Emergency response coordination mechanisms	• Health sector, and where appropriate cluster operational plan for all potential emergency situations, involving all relevant stakeholders • Early warning forecasting systems, for example, Early Warning, Alert and Response Network (EWARN) and Early Warning, Alert and Response System (EWARS) • Clear institutional structures with appropriate triggering mechanisms in the event of public health emergency • Incident management systems and public health emergency operations centers • Formal, multidisciplinary emergency preparedness and response program at national, regional and local levels • Leadership of community efforts for emergency preparedness and response
7. Availability and accessibility of adequate financial resources for emergency management	• Sustainable contingency fund with clear guidance and mechanisms for access, for example, national budgetary systems that provide financing expeditiously in the aftermath of and recovery from an emergency
8. Availability and accessibility of adequate essential medicines and other supplies for emergency management	• Stockpiling, warehousing, and prepositioning of supplies of essential medicines, pharmaceuticals, vaccines, and nutrition and food supplements on the basis of risk profiles
9. Integrated information systems that support the monitoring and evaluation of population health and health systems	• Integrated national surveillance systems linked to the event-based surveillance and participatory surveillance systems to intensify active surveillance, extending from local to national level • Functional civil registration system to record vital statistics for the population
10. Mechanisms that ensure interoperability and data sharing among key stakeholders, including trusted public information, alert and communication systems	• Formalized data-sharing procedures and tools across sectors and among different levels • Interoperable electronic tools for public health surveillance • Public information and alert system to quickly relay important messages to and from various sources (civil, health, governmental, nongovernmental and international actors), adapting the media channels to on-the-ground emergency conditions

EPHF 3

Public health stewardship: Establishing effective public health institutional structures, leadership, coordination, accountability, regulations and laws

Description

This activity covers means, processes and actions that develop and maintain strong public health leadership in institutional structures for public health decision-making. This includes developing institutional and operational structures to lead and coordinate the delivery of public health functions and services and formulating regulations and legislation that enable actions for disease prevention, health promotion and protection.

Subfunctions include:

- **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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of public health-related data, including health status, health-related behaviors, disease incidence and prevalence, and hazards and threats, to inform priorities for legislative and regulatory action	• Population health needs assessment • Periodic risk profiling and vulnerability assessment at national, regional and local levels • Early warning and alert for priority and other emerging hazards
2. Monitoring and evaluation of health systems, services and interventions, including health system performance, health service utilization and user satisfaction, and health system threats and vulnerabilities	• Health system performance assessment • Monitoring the continuity of essential health services during health emergencies • Public health program evaluations
3. Synthesis of available evidence to support evidence-informed decision-making at all levels	• Health impact assessment of policies outside the health sector • Development of policy briefs, white papers, green papers, research briefs, and other publications to inform policy-makers and senior decision-makers • Local health profiles with national benchmarks publicly available, for example, “open comparisons” between municipalities, county councils and regions (Sweden)
4. Development, evaluation and reform of institutional structures or platforms with defined responsibility for EPHFs at all levels	• Review of delivery of EPHFs with regard to policy and planning, infrastructure and service delivery • Integration of health system actors into emergency response activities
5. Development and monitoring and evaluation of public health legislation and regulations	• Development of regulations on protection against infection in health services • Development of regulations on tobacco control in line with the WHO Framework Convention on Tobacco Control overview • Review of the Public Health Act • Regulation review program
6. Implementation of public health legislation and regulations	• Timely reporting of internationally and nationally notifiable diseases in accordance with the International Health Regulations and state laws • Designing and implementing laws and policies in other sectors through a broader approach to maximize their positive effects on population health, for example through strong governmental enforcement of the European Union trade law to control illegal trade and smuggling of alcohol

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Mechanisms supporting national government commitment to public health as an explicit priority in national policy	• Explicit goals and actions on public health in national development plan • Leadership and support for a Health in All Policies approach from the executive branch of government • Existence of specific national priorities related to improving the health of vulnerable populations, including women, children, ethnic minorities, migrants and the poor • Existence of a strong mandate or authority from public health agencies or the ministry of health with regard to a wide range of public health functions • Government structure leading and coordinating public health functions in an integrated manner, for example, State Hygiene and Anti-Epidemic Inspectorate mandated with responsibilities across public health functions (Armenia)
2. Institutional capacity to influence the formulation and enactment of public health policies, laws and regulations and a Health in All Policies approach in other sectors, supported by adequate and competent public health workforce	• Strong ministry of health capacity to develop, enact and implement appropriate national legislation to improve public health and promotion of healthy environments and behaviors • Strong operational coordination capacities with law enforcement and civil enforcement agencies • Adequate human resources for public health governance and laws, with regard to quantity and quality • Including capacities in leadership, policy development, and stakeholder engagement in public health workforce education and training curricula
3. Mechanisms that promote multisectoral partnerships and participatory approaches, including with respect to social engagement, public health governance and regulations	• Advancing emergency preparedness through a One Health Act • Memorandum of understanding between public health authorities and law enforcement to enhance coordination of emergency preparedness across sectors • Public consultation on draft regulations for providers of home support services
4. Availability, accessibility and sustainability of adequate financial resources in support of public health stewardship	• Stable budgets allocated to national public health institute to support its implementation of core functions
5. Interoperability and information-sharing mechanisms between information systems within the health sector and across allied sectors in support of information flow and exchange, for strengthening public health stewardship	• Reporting systems to collect information from local health authorities and health facilities • Protocols for data exchange across regional health information systems in decentralized health systems

EPHF 4

Multisectoral planning, financing and management for public health: Supporting effective and efficient health systems and multisectoral planning, financing and management for public health

Description

This activity refers to the incorporation of public health orientation into health systems and multisectoral planning and financing for population health. This involves the alignment of health sector and system planning, sustainable financing and program management with population health needs and priorities in a manner that is integrated and public health oriented, and that achieves maximal health gain within available resources.

Subfunctions include:

- **Subfunction 4.1:** Conducting evidence-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 a 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 (water, sanitation, waste, 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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Integrated population health needs assessment and risk profile-informed prioritization	• Population health needs assessment • Mapping main lifestyle and behavior risks in community served • Periodic risk profiling and vulnerability assessment at national, regional and local levels using multisectoral approach and mechanisms, for example One Health collaborations • Utilizing data provided by local and state public health departments to determine priority areas of focus for population health and social needs
2. Development of policy tools to promote and influence the health system towards better performance and other sectors towards better population health outcomes, with an integrated approach to planning and financing	• Developing the South Australian Healthy Parks Healthy People program using a Health in All Policies approach (Australia) • Development of the South Australian Health in All Policies model focusing on improving population health and well-being outcomes through action on the policies of other sectors that impact the social determinants of health (Australia) • Defined minimum list of services, including public health services, that all regions and local health authorities need to deliver • Population health management approach to procurement and service commissioning
3. Monitoring and periodic evaluation of public health policies, financing, interventions, programs and services, to inform health sector and intersectoral planning and financing	• Evaluation of cost–effectiveness of public health interventions • Monitoring of budgets and funding to implement public health interventions • Health system performance assessment • Monitoring the continuity of essential health services during health emergencies
4. Provision of multidisciplinary behavioral and social science strategic analysis and advice based on data, evidence and theory to inform policy- and decision-making	• Provide expert and rapid behavioral insights advice for policymaking including: problem definition; identification of barriers, interventions and research options; and rapid review and recommendations for improvement of policies, programs, services, or communications. • Define and diagnose behaviors and their influences through evidence synthesis and participatory primary mixed-methods research. • Co-design and pilot context-appropriate interventions using data, evidence and theory to select policy options, modes of delivery and behavior change techniques. • Evaluate impact, process and value for money including experimental and quasi-experimental approaches where appropriate. • Enable communities, stakeholders and users to contribute to policymaking 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.

Public health services	Examples
5. Communication with relevant stakeholders in the health sector and allied sectors in support of the timely exchange of information	• Population profiles reviewed and communicated with service managers • Exchange of local-level good practices between municipalities at conferences and forums
6. Identification of national public health research priorities to improve public health planning and financing	• Identification of public health research priorities led by commissioned national institute working with health service providers and communities • Assessment of public health performance by the directorate of research, including studies, evaluation and statistics to inform evidence-based recommendations
7. Development of coherent, resourced national action plans for preparedness, response and resilience	• Assessment and review of national preparedness capacities, capabilities and risk assessments • Development of a prioritized, costed action plan, for example, five-year national action plans for health security or one- to two-year operational national action plans for health security • Development of technical and financial resource mobilization plans, including funding proposals • Implementing, monitoring and updating the plan based on changing capabilities and risks

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Mechanisms supporting adequate public health orientation in health system	• National policy priority programs supporting health service by transitioning from treatment to keeping people healthy and well (Ireland) • Well-being of Future Generations Act 2015 with an integrated approach to public health, equality, resilience and cultural development (Ireland) • For Community Healthcare Organization Area 1 – Healthy Ireland, steering groups established with cross-functional representation (Ireland) • State health agency responsible for collecting information from contracted health care facilities about their activities and finances
2. Mechanisms that support and facilitate multisectoral partnerships and accountability for population health in the policy cycle	• Executive order by the governor mandated the establishment of a Health in All Policies task force to oversee the initiative (United States) • Health impact assessment as a routine feature of policy cycle in other sectors • Existence of the leadership group that oversees the Canterbury Health in All Policies Partnership at the regional and city levels (New Zealand) • National and regional health conferences with involvement of various actors advising health authorities on public health issues, including patients' and citizens' organizations, associations of health professionals, health product industries, health insurance funds and research institutions
3. Mechanisms that enable effective participation of communities, social actors and civil society in planning, implementation and monitoring and evaluation of public health activities	• Participation of community health groups in the development of Healthy Cities and Counties plans and their implementation • Public consultation on draft regulations for providers of home support services for capturing population feedback and supporting communities in the articulation of their views and concerns about health and well-being (Ireland) • Participation of local governments and communities in the provision of social safety nets and livelihood support for populations in situations of vulnerability, for example those suffering from chronic illnesses or located in hard-to-reach areas • National action plan for health security
4. Adequate and competent workforce for reviewing and improving major health policies, plans, strategies and investments	• Decision-makers and health managers with capacities to develop research briefs or green papers, scientific advisers, or other means to inform policy-making • Decision-makers and health managers with capacities to deliver budget, assess cost–effectiveness and develop impact analyses before selecting interventions • Decision-makers and health managers with capacities to conduct stakeholder analysis and engagement

Public health system enablers	Examples
5. Monitoring and evaluation mechanisms embedded in policies, strategies and plans on public health	• Monitoring and evaluation framework exists in public health action plans • Structural, process and outcome indicators linked to time-based targets • Public health strategy with multisectoral indicators for health
6. Mechanisms for aligning financial resource allocation with priority health and other sectoral policies, action plans and programs to address public health problems	• Activities in action plans for health are in national budgets and health system financing plans • Development of a prioritization framework for public health investment • Multiyear, long-term budgets for priority public health programs • Earmarked taxes for financing priority public health issues, for example, earmarking of tobacco and alcohol tax for tobacco and alcohol control and health promotion programs • Arrangements in place for pooling public funds from different sectors through permissive mechanisms

EPHF 5

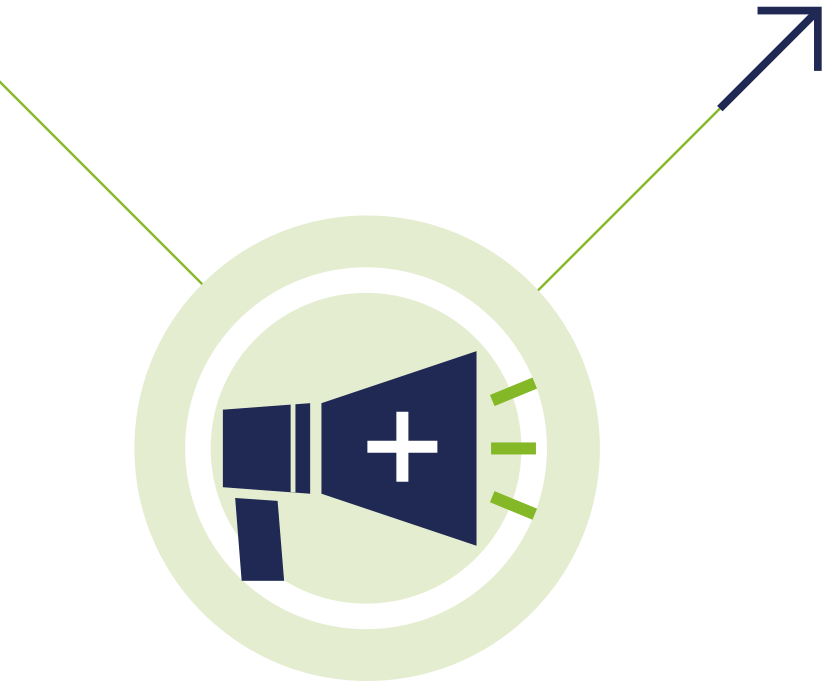
Health protection: Protecting populations against health threats, for example environment and occupational hazards and communicable and noncommunicable diseases, including mental health conditions, food insecurity, and chemical and radiation hazards

Description

This activity involves the means, processes and actions that protect population health from various natural, human-induced and environmental (including those from climate variability and change, and in the built and lived environment) hazards, which may or may not evolve as public health emergencies. This activity typically covers environmental health, occupational health, food safety, monitoring and control of antimicrobial resistance, diagnosis of behavioral barriers, protection from chemical, biological, radiological and nuclear hazards, protection from infectious diseases, road safety, patient safety, and communicable and noncommunicable diseases (including mental health conditions). This activity typically crosses sectoral and national boundaries to include intersectoral and international efforts that influence potential or identified threats to health.

Subfunctions include:

- **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 (for example, workers, patients, 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



Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of public health data, including health status, health-related behaviors, disease incidence and prevalence, and hazards and threats, to inform identification and assessment of risks	• National, regional and local risk profiling and vulnerability assessment • Public health risk assessment in living environments • Workers' health surveillance • Workplace inspections
2. Synthesis of available evidence to support evidence-based decision-making at all levels	• Development of policy briefs, white papers, and other publications to inform policy-makers and senior decision-makers • Development of district risk profiles based on data collected from local and community health facilities, communities, and actors in other sectors, such as environment and social care • Community risk assessment in hazard-prone areas with community participation • Readiness needs assessment in communities and districts with impending threats, for example, coming cyclone, outbreaks in surrounding areas
3. Development and implementation of programs for prevention, mitigation, management and control targeting specific health hazards and risks, based on risk profiling and population health needs assessment	• Development and implementation programs for inspection of specific settings, including schools, food premises, and workplaces, with respect to health hazards • Development and implementation of occupational health programs • Development and implementation of environmental health programs • Development and implementation of food safety programs • Development and implementation of road safety programs • Incident and outbreak investigation and control, including case management
4. Monitoring and evaluation of health protection laws and regulations, policies, programs, and interventions	• Health impact assessment of employment and labor policies • Evaluating activities, budgets, and population health outcomes of occupational health programs as an essential element of designing and improving health programs
5. Communication between relevant stakeholders that ensures the timely exchange of appropriate and accessible information	• Risk communication relating to priority risks or evolving public health incidents • Knowledge campaign on health hazards and risks among stakeholders, including communities, for example road safety education program or promotion of safe food handling
6. Identification of national public health research priorities	• Identification of public health research priorities led by commissioned national institute working with health service providers and communities

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Clear institutional structures to support health protection efforts at national, subnational and service delivery levels	• Functioning environmental public health units or units from other ministries in charge of monitoring the quality of the environment • Veterinary and agricultural health units at all levels • Existence of independent mandate and authority by lead enforcement agency to mitigate or eliminate specific hazards in society
2. Legislative and regulatory frameworks for protecting population against health hazards	• Environmental standards and regulations in the areas of indoor air, outdoor air, water, soil and other media • Legislation pertaining to the safety, health and working conditions of workers • Health codes for food safety (production, transport, distribution, labelling, marketing, sale) • Smoke-free laws in line with the United Nations Framework Convention on Tobacco Control • Road safety framework • Consumer product safety norms, including for imported and exported products • Notifiable infectious disease legislation and regulations • Legislation pertaining to spatial planning and land use
3. Mechanisms that promote and apply an integrated and multisectoral approach to planning, resource allocation and service delivery based on population need and priority risks	• Comprehensive monitoring system for antimicrobial resistance and antibiotic consumption across main sectors, including veterinary sector, food safety, agricultural sector, environmental sector, reference laboratories, health care facilities, primary and community care, and pharmacies • Network of reference laboratories for monitoring, reporting and investigating antimicrobial resistance and zoonoses in all laboratories in the veterinary, food safety, agricultural, environmental, and human health sectors • Food safety and veterinary state inspection under the Ministry of Agriculture working closely with the State Hygiene and Anti-Epidemic Inspectorate under the Ministry of Health for the control of zoonoses (Armenia)
4. Mechanisms that enable effective participation of communities, civil society and other social actors in planning, implementation, and monitoring and evaluation of health protection activities	• Community environmental monitoring supporting pollution-impacted communities in protecting people's health • Public consultation on how the Medicines and Healthcare products Regulatory Agency communicates with health care professionals to improve the safety of medicines and medical devices (United Kingdom) • Community scorecards as part of the social accountability framework for the Social Action Fund to promote sustained improvements in service delivery (Malawi)

Public health system enablers	Examples
5. Integrated information systems that support the monitoring and surveillance of population health status, health system performance, risk factors and health threats	• Registries for major occupational risks • Electronic reporting and information system for infectious diseases connected with doctors, laboratories and all health offices nationwide
6. Trusted public information and communication systems and infrastructures	• Public warning systems and emergency notification systems • Official channels for timely and consistent public communications
7. Adequate and competent public health workforce to enable the prevention and control of health hazards at national, provincial or state, regional and local levels	• Incorporation of training in notifiable infectious diseases and management of diseases with outbreak potential into medical curricula • Inclusion of risk management, strategy development and implementation, regulatory monitoring, risk communication, interpretation of health and risk data, and stakeholder analysis and engagement in the education and training curricula for the public health workforce • Mechanisms for surge capacity at national, subnational, local and community levels for readiness and response to public health emergencies
8. Availability, accessibility and sustainability of financial resources for priority health protection programs based on population health needs and risk profiling	• Multiyear, long-term budgets for priority public health programs
9. Availability of essential medications and other health products	• Stockpiling of essential medicines, vaccines, nutrition and food supplements for preparing for priority hazards identified in risk profiling and population health needs assessment

EPHF 6

Disease prevention and early detection: Prevention and early detection of communicable and noncommunicable diseases, including mental health conditions and injuries

Description

This activity involves the means, processes and actions that support the prevention and early detection of communicable and noncommunicable diseases, including mental health conditions, in a defined and targeted population. The activity typically covers primary, secondary and tertiary prevention.

Subfunctions include:

- **Subfunction 6.1:** Designing, implementing, monitoring and evaluating interventions, programs, 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 program activities aimed at reducing exposure to risk factors and promoting factors that prevent disease

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of public health-related data, including health status, health-related behaviors, disease incidence and prevalence, and hazards and threats	• Telephone surveys that collect state data about residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services (United States) • Regular evaluation of epidemiological trends and conditions • Community health needs assessment • Health system performance assessment
2. Synthesis of available evidence to inform decision-making	• Development of epidemiological report, rapid risk assessment, public health situation analysis, policy briefs, white papers, and other publications to inform senior decision-makers in policy-making and service design
3. Development and implementation of immunization campaigns and programs based on population health needs and equity considerations (primary prevention)	• Universal immunization program providing vaccines to infants, children, pregnant women and other vulnerable groups, for prevention of priority diseases • Targeted vaccinations for specific groups, including people traveling to high-risk areas and health care workers • Targeted vaccinations in response to emerging health threats, for example COVID-19 and mpox
4. Development and implementation of programs and interventions that support early identification and appropriate management of priority health conditions based on population need and the principle of equity (secondary prevention)	• Identification of priority screening programs based on population risks • Screening for disease and physical, environmental, behavioral and social risk factors • Opportunistic screening, including routine physical examinations and screening for intimate partner violence, elder or child abuse, Making Every Contact Count program • Screening for self-harm and suicide risk in people with mental, neurological and substance use conditions • Abdominal aortic aneurysm screening in males aged over 70 years • Diabetic retinopathy screening
5. Development and implementation of programs and interventions that minimize disease progression or complications or their impact based on population need, in line with equity principles (tertiary prevention)	• Integration of secondary prevention in chronic disease management programs • Defining chronic disease rehabilitation packages (cardiac, pulmonary, stroke) • Development of national programs for prevention and control of chronic diseases (cancer, diabetes, cardiovascular diseases and stroke) • Ensuring access to palliative care services based on need

Public health services	Examples
6. Development and implementation of priority preventive health programs based on population health needs and priority risks	• Newborn and early childhood screening, for example for congenital malformations, newborn bloodspot, developmental delay • Falls prevention programs targeted at the elderly • Migrant health programs • Homeless health and social services • Harm reduction interventions and services • Diabetic screening for neuropathy and retinopathy
7. Communication with relevant stakeholders to ensure the timely exchange of appropriate and accessible information relating to a public health issue	• Advocacy for legislation and policies in support of prevention interventions and services • Public awareness programs to promote prevention and early detection of diseases and illnesses • Vaccination campaigns
8. Monitoring and evaluation of disease prevention policies, strategies, interventions and services	• Regular monitoring and evaluation of screening services to ensure quality, effectiveness and equity • Periodic review of disease prevention policies and programs • Health impact assessment of healthy environment program
9. Identification of national public health research priorities	• Identification of public health research priorities led by commissioned national institute working with health service providers and communities

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Legislative, regulatory and policy frameworks and policies for disease prevention and early diagnostic interventions	• Infectious Disease Control and Prevention Act • Legal frameworks supporting national newborn screening
2. Integration of priority prevention interventions and services in primary care and specialized care platforms	• Integration of preventive services (for example, immunization, preventive health examination, routine check-up to detect high blood pressure, diabetes and lung diseases, plus a breast examination and the Pap smear test for women and a prostate gland examination for men) and health promotion activities within primary care
3. Availability and accessibility of adequate financial resources	• Integration of priority disease prevention activities in national health budget line
4. Competent public health workforce for disease prevention and early detection at national, provincial or state, regional, and local levels and service delivery platforms	• Training of clinical staff to ensure appropriate focus on prevention at all service delivery levels • Integration of competencies in data and evidence synthesis, delivering prevention and early detection services, policy development and evaluation, stakeholder analysis and engagement, service design, advocacy and risk communication in workforce education and training curricula
5. Mechanisms for the procurement and stockpiling of essential medicines, vaccines, nutrition and food supplements, for disease prevention	• Agreement between the government and private sector in supplying vaccination • Secure cold chain
6. Mechanisms that enable effective community engagement in planning, delivering and monitoring and evaluating prevention interventions and services	• Community and civil society networks to transfer expertise, capacity, information, best practices, and lessons learned in health communication for noncommunicable diseases to communicable diseases • Community scorecards as part of the social accountability framework for the Social Action Fund to promote sustained improvements in service delivery (Malawi)
7. Mechanisms that support and facilitate multisectoral partnerships and participatory approaches with key stakeholders in the health policy and intersectoral policy cycle and resource allocation based on population need and priority risks	• Healthy Ireland Network with national and local organizations communicating with the Healthy Ireland Council or team to provide evaluation, feedback and other information (Ireland)

Public health system enablers	Examples
8. Information systems supporting monitoring population health and implementing disease prevention programs	• Behavioral risk factor surveillance system collecting state data about United States residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services (United States) • Integrated public health information systems for communicable and chronic disease surveillance, case management, contact management, outbreak management, workflow, electronic report management and reporting
9. Appropriate infrastructure to support the delivery of priority services, including primary health care, hospital sector and laboratory capacities	• Cold chain infrastructure to primary care level • Maintaining bed occupancy rates of 80% or less • Use of population parameters to inform service planning (for example, number of hospital or intensive care unit beds per population)

EPHF 7

Health promotion: Promoting health and well-being as well as actions to address the wider determinants of health and inequity

Description

This activity involves the means, processes and actions that promote health, act on the wider determinants of health and inequity, and empower populations and communities to increase control over their health and its determinants. This function focuses on health promotion actions, programs and interventions for changes in behaviors, lifestyle, practices, and the environmental and social conditions, including those targeting specific populations and health conditions.

Subfunctions include:

- **Subfunction 7.1:** Designing, implementing and evaluating specific interventions or programs to promote health, including changes in behavior, 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 diseases 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 behaviors and reducing inequities
- **Subfunction 7.4:** Undertaking evidence-based advocacy and health communication to promote healthy behaviors and socioecological environments and build community trust

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of public health-related data, including health status, health-related behaviors, disease incidence and prevalence, and hazards and threats	• Telephone surveys that collect state data about residents regarding their health-related risk behaviors, chronic health conditions and use of preventive services • Regular evaluation of epidemiological trends and conditions • Community health needs assessment • Health system performance assessment • Surveillance of targeted population's access to public health interventions and services
2. Regular identification and review of priority risks and population needs to inform planning, financing and management at national, regional or local level	• Population health needs assessment • Risk profiling at local, regional and national levels
3. Synthesis of available evidence to support evidence-based decision-making at all levels	• Development of policy briefs, white papers, and other publications to inform policy-makers and senior decision-makers
4. Provision of multi-disciplinary behavioral and social science strategic analysis and advice based on data, evidence and theory to inform policy and decision-making	• Provide expert and rapid behavioral insights advice for policymaking including: problem definition; identification of barriers, interventions and research options; and rapid review and recommendations for improvement of policies, programs, services, or communications. • Define and diagnose behaviors and their influences through evidence synthesis and participatory primary mixed-methods research. • Co-design and pilot context-appropriate interventions using data, evidence and theory to select policy options, modes of delivery and behavior change techniques. • Evaluate impact, process and value for money including experimental and quasi-experimental approaches where appropriate. • Enable communities, stakeholders and users to contribute to policymaking 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.
5. Communication with relevant stakeholders to ensure the timely exchange of appropriate and accessible information relating to a public health issue	• Advocacy for health and intersectoral policy-makers to ensure appropriate legislation and policies that promote and ensure population health and health equity • Information campaigns for parents and educators to promote the health of children • Education and communication programs for disease prevention and health promotion to the public • Campaigns to address misinformation • Equitable dissemination of accurate information
6. Development of actions, programs and interventions aimed at promoting healthy conditions, lifestyles, behavior and environments	• Developing national tobacco control program with the aim of developing greater awareness of the harmful effects of tobacco and existing tobacco control legislation • Defining package of sexual and reproductive care to be delivered • Defining curriculum for school sexual health program

Public health services (continued)	Examples (continued)
7. Priority health promotion programs and interventions targeting specific risks, settings or populations	• Recognition and prevention of domestic violence, risk factor modification (for example, exercise, physical activity, smoking cessation and reduced alcohol consumption), advance directives, early prenatal care and child passenger safety • SunSmart campaigns to raise awareness of skin cancer and skin protection (Ireland) • School food programs (for example, healthy lunches and provision of food for disadvantaged children) • Chronic disease self-management programs • Sexual and reproductive health interventions and services, including family planning services, counselling to sex workers and other high-risk populations, pre- and post-termination support services • Targeted behavioral modification for risk factors, including brief interventions for behavior change within primary care, and referral for specific support services (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 programs and school sexual education programs
8. Monitoring and evaluation of health promotion policies and interventions	• Health impact assessments on full range of national policies • Evaluation of national implementation of “best buy” interventions to control noncommunicable diseases • Monitoring effectiveness of smoking ban
9. Identification of national public health research priorities	• Consultation and partnership with patients, service users, carers, health and care workers, service managers and researchers about which research questions most urgently need addressing • Commissioned funding calls for specific research questions • Interdisciplinary forums to identify health system research priorities

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Legal and regulatory frameworks that improve health and promote healthy environments and behaviors	• Public health legislation relating to smoking and alcohol, for example, smoking bans, minimum unit pricing, advertising restrictions • Regulation of food products (salt, sugar, fat content) and labelling
2. Integration of health promotion programs into service delivery platforms	• Integrating the administrative and financial structure of noncommunicable disease control programs into an integrated network of primary, secondary and a part of tertiary care, at district level • Making Every Contact Count program using day-to-day interactions between organization and population in behavior change for better physical and mental health and well-being (Ireland)
3. Mechanisms that support and facilitate multisectoral partnerships and participatory approaches with key stakeholders in the health policy and intersectoral policy cycle	• Ministerial round tables to better understand the practical solutions needed in the aged care sector (Australia) • Cross-cutting policies and interventions to address the main behavioral risk factors for noncommunicable diseases • Agreement between the ministry of health and the ministry of education to introduce health education programs into the school curriculum • Working with private sector actors and influencers in the community
4. Participatory structures and platforms supporting community engagement in the policy and planning, implementation, and monitoring and evaluation of health promotion interventions and activities	• Healthy Ireland Network with national and local organizations communicating with the Healthy Ireland Council or team to provide evaluation, feedback and other information (Ireland) • Healthy Cities initiatives mobilizing communities in creating and improving physical and social environments to address social determinants of health and improve health of urban dwellers • Involvement of NGOs and networks of people living with HIV in awareness generation and behavior change programs
5. Adequate and competent workforce to implement health promotion programs, interventions and services at different levels	• Health workforce education and training curricula, including stakeholder analysis, interpretation, engagement with a participatory and collaborative approach, interpretation of public health data, and policy and legislative development and advocacy
6. Availability and accessibility of adequate financial resources for health promotion programs and services	• Dedicated and clear budget line according to objectives in comprehensive multiyear health plan and annual workplan • Mixed methods of financing disease prevention and health promotion programs
7. Appropriate infrastructure and capacity to support the delivery of priority promotive services in all contexts, including primary health care, hospital sector, and laboratory and diagnostic services	• Adequate length of primary health care consultation to facilitate brief cognitive behavioral therapy or motivational interviewing to promote healthy lifestyles and behaviors • Reliable information and communication technologies and systems supporting health communication

EPHF 8

Community engagement and social participation: Strengthening community engagement, participation and social mobilization for health and well-being

Description

This activity involves communication and engagement between the community and the public sector to inform, influence, motivate and engage populations on health issues. This involves building an environment where well informed citizens are able to take decisions and responsibilities regarding their own health. This also involves actions to increase health literacy and self-efficacy with the ultimate aim of promoting community participation in health service design and planning and enhancing communities' capacities to access, understand and use information to reduce health risks, prevent disease, promote health, utilize health services, and participate in making and lobbying for health policies within the community.

Subfunctions include:

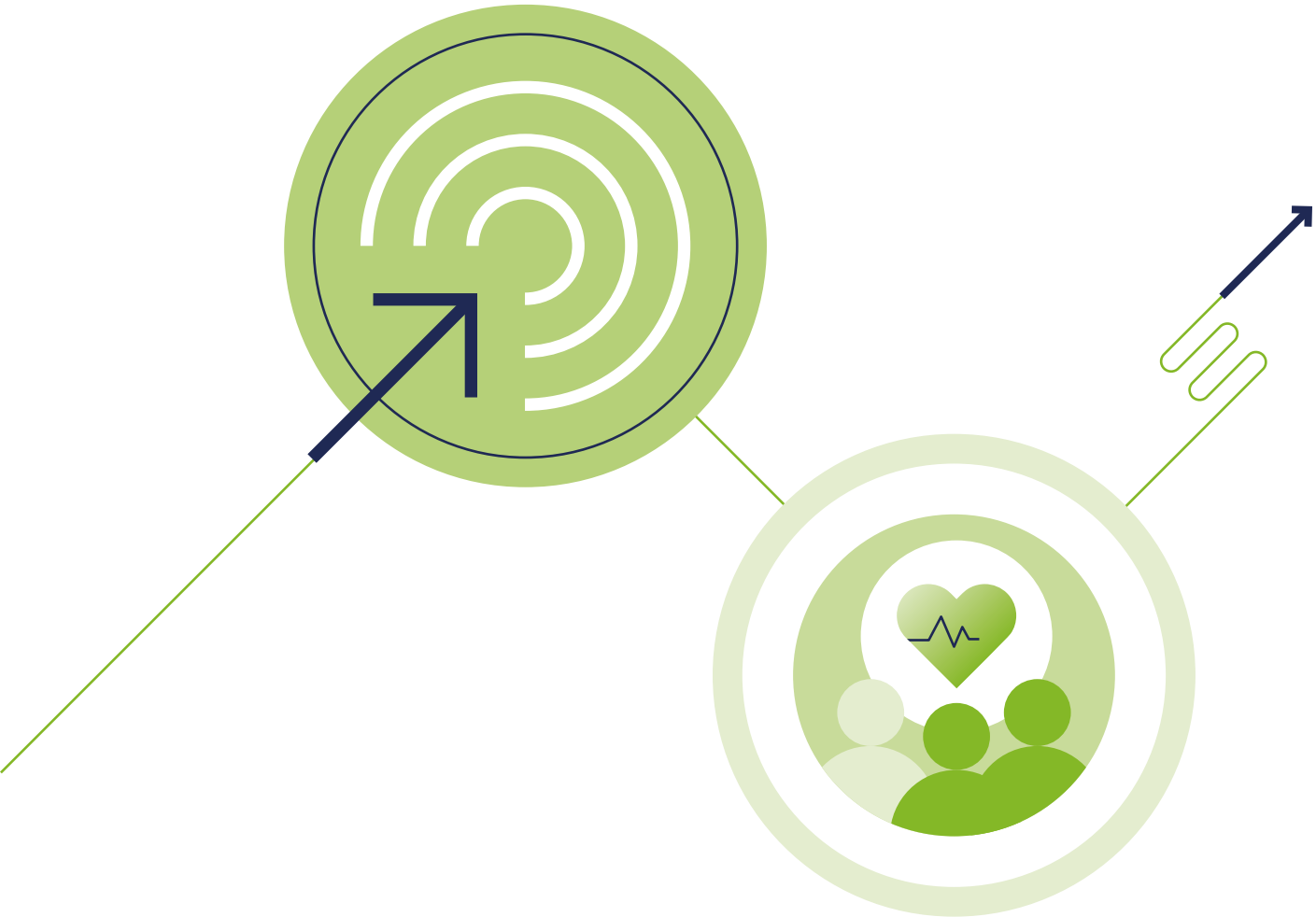
Subfunction 8.1: Promoting participatory decision-making and planning for health and the promotion of societal change that enhances, promotes and protects health and well-being

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 programs as part of a whole-of-society approach

Subfunction 8.5: Engaging communities in health preparedness, readiness, response and recovery



Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Promoting and applying a participatory approach to public health planning and health service design	• Awareness-raising campaign for community engagement in planning and delivering public health services and programs
2. Development of health literacy interventions and programs enhancing the accessibility of health information and empowering communities to participate in public health planning and services	• Community health literacy programs on health insurance • Diabetes Literacy and Numeracy Education Toolkit (United States) • Patient, family and community engagement and education on palliative care to address taboos and lack of understanding • Ministry of health distributing posters and leaflets targeting particular vulnerable groups to inform them of their entitlements, and requiring such posters to be displayed at the entrance to health facilities
3. Communication between the public sector and communities in support of the timely exchange of appropriate and accessible information for community engagement and empowerment	• Two-way communication between health authorities and at-risk populations in response to COVID-19 • Hotline services whereby members of the public can raise concerns or make requests direct to the minister, supported by collaboration with mass media to raise awareness
4. Development and implementation of community-based public health programs and interventions to meet population health needs	• Community-led adherence to HIV care support and work to retain in care • Community surveillance of potential, priority and emerging health issues • Identification of healthy food items in partnership with local restaurants and grocery store • Establishment of food-sharing collective to support vulnerable populations and reduce food waste • Collaboration with local farmers and growers to organize a farmers' market to make fresh produce accessible to consumers and to promote healthy eating • Participation of local governments and communities in the provision of social safety nets and livelihood support for populations in situations of vulnerability, for example those suffering from chronic illnesses or located in hard-to-reach areas
5. Engaging communities for health preparedness, readiness, response and recovery	• Participatory mechanisms for community risk assessment • Capacity-building of community health workers and volunteers for community-based surveillance and community early warning systems • Co-designing of community response and contingency plans, business continuity plans and recovery plans • Co-designing and implementation of response measures, including risk communication, public health and social measures, and water, sanitation and hygiene interventions with communities • Testing of emergency plans with communities to strengthen coordination and incident command
6. Monitoring and evaluation of community and social engagement efforts	• A clear vision, measurable objectives, and clearly defined target audience and methods of evaluation • Periodic evaluations and subsequent refinement of communication strategy performed

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Policy tools on community engagement in public health	• Community engagement strategy to develop and sustain meaningful, effective relationships between communities and the workforce • Health literacy plan in support of organizations offering accurate, accessible and actionable health information • Community Engagement Planning Tool for Public Health Work (United States) • Social media strategies
2. Institutional mechanisms supporting whole-of-society approaches to policy and planning, implementation, and monitoring and evaluation of public health system services and activities	• Healthy Ireland Council (Ireland) • Social accountability mechanisms for public health • Legal framework for partnership between government and communities, civil society, NGOs and the private sector
3. Adequate and competent workforce to support community engagement and social mobilization	• Health communication and social engagement competencies within health workforce curricula • Service agreements within the health system and with the private sector, communications industry, aid organizations, and other relevant actors to ensure adequate workforce to deliver services to communities • engagement with civil society organizations, community-based organizations, and nongovernment organizations for community engagement, mobilization, risk communication, capacity-building and other activities
4. Availability and accessibility of adequate financial resources in support of community engagement and social participation	• Specific budget for health communication in national health budget, program budget, and the private and commercial sectors • Financial support for community organizations • Mobilization of community resources to improve population health in line with population health needs and priority risks • Proper adaptation of the scope and target audience of communication programs to resource availability
5. Infrastructure and information channels for communication and social mobilization efforts (official and informal websites, hotlines, webinars and social media)	• Partnership with public and private mass media and NGOs in broadcasting reports, interviews and round-table discussions on healthy lifestyle issues, such as smoke-free workplaces, personal behavior, diet and nutritional habits • Utilization of low-cost media (for example, mobile technology, radio, internet) to optimize resource use • Citizens assembly on how best to respond to the challenges and opportunities of an ageing population • Healthy Cities and Counties program

EPHF 9

Public health workforce development: Developing and maintaining an adequate and competent public health workforce

Description

The activity involves the means, processes and actions that manage and optimize the public health workforce, developing the right skills mix and competencies (for example, technical, communication, strategic and leadership skills), to support the delivery and implementation of public health services and activities in line with population health needs

Public health services that support the implementation of this public health function include the following..

Subfunctions include:

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 (for example, 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

Public health services	Examples
1. Developing the public health workforce with respect to quantity, competency, distribution and ethical standards	• Determination of core and emerging competencies to implement agreed essential public health functions in a national context • Provision of quality competency-based public health education and training of the public health workforce, with curriculum aiming at aligning their competencies with the duties and responsibilities required to meet population health needs, and with their career pathways • Certification, registration and licensing of health and care personnel based on established norms and standards • Provision of in-service training to the public health workforce, including support schemes for practitioners in distress and struggling to maintain competency • Accreditation of educational and training schemes for the wider public health workforce
2. Population health needs assessment informing public health workforce development planning	• Community health needs assessment
3. Analysis and monitoring of public health workforce to understand baseline capacities, including density relative to population, skills mix, competency, geographical distribution, mobility, and entry and loss	• Clearly defined set of health workforce indicators, including the current and future demand for health services, workforce supply, deployment, staff retention and attrition, staff productivity, service needs and outputs, and private health sector data • Investigation of complaints against health and care workers • Evaluation of education programs and in-service training

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Regulatory and policy frameworks to ensure appropriate education, training, licensing, accreditation, recruitment and retention of the public health workforce, including standards and instruments for professional development	• Labor law and rules protecting the health and well-being of the public health workforce • National health workforce strategy that includes adequate consideration of public health capacities and competencies • Specific professional standards, licensing and accreditation systems for public health professionals
2. Information systems and tools in support of monitoring and evaluation of the public health workforce	• National health workforce accounts • Human resources for health information systems • Health workforce registries • Health workforce observatory • Health workforce planning tools
3. Coordination of public health workforce development within and between health and allied sectors	• Structures and agreements for strategic partnerships within the health sector and with different sectors on public health workforce development • Coordination of human resource planning between ministries of health and institutions of higher education • Presence of public health component, covering basic public health functions, within multidisciplinary curricula for the wider public health workforce, for example, journalism, public policy, education and environment
4. Mechanisms to incentivize, retain and develop the public health workforce	• Clear career trajectories for public health occupations • Incentives to retain physicians and nurses in countries and regions with human resource shortages • Prioritization of management and leadership training • Periodic recertification procedures based on performance and up-to-date training • Inclusion of respective budget lines for salaries, allowances, education, incentive packages and other compensation for public health professionals

EPHF 10

Health service quality and equity:
Improving appropriateness, quality and equity in provision of and access to health services

Description

This activity involves supporting the provision of and improving equitable access to comprehensive, high-quality and integrated health services that are consistent with population health needs.

Subfunctions include:

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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Population health needs assessment to inform the identification of priority populations, geographical areas, disease conditions and health programs, as well as areas of unmet need	• Community health needs assessment • Assessment of health needs of refugees
2. Development of guidelines at national or regional level to inform planning and practices, as well as effective implementation of policies, strategies and plans at local and service delivery levels	• Development of national emergency planning guidelines informing emergency planning in health facilities • Development of guidelines for investigation of outbreaks of foodborne and waterborne diseases
3. Implementation and adaptation of relevant policies, plans, legislation and regulations in alignment with local and service delivery contexts, to ensure quality and accessibility	• Implementation of quality standards for health and social care • Implementation of the General Act on Equal Treatment, explicitly addressing the area of health care
4. Provision of essential health service package based on population health needs	• Provision of basic benefit package as a publicly funded package specifying the services that are either fully or partially subsidized (primary care, maternity services, sanitary and epidemiological services, and treatment for around 200 socially significant diseases) • Ensuring access to essential health services during public health emergencies and outbreaks, especially in remote areas and hard-to-reach communities
5. Quality assurance	• Quality assurance of patient care • Performance of internal quality control procedures in all health care facilities • Accreditation process for health care facilities and professionals, based on performance, continuous training, and compliance with quality and safety standards
6. Monitoring and evaluation of health systems, services and interventions, including health system performance, health service utilization, and user satisfaction, as well as health system threats and vulnerabilities	• Monitoring of geographical accessibility of health services in health system performance assessment • Monitoring the quality of health care by carrying out unannounced visits to health services • Performance of external quality assessment procedures in all health care facilities (for example, certification, accreditation and audits) • Reporting of monthly outcomes related to clinical quality indicators and standards of care • Monitoring activities to track the use of new health technologies (medicines, diagnostic equipment and clinical procedures) • Periodic conduct of patient satisfaction surveys in health facilities at all levels
7. Identification of national public health research priorities for equal access to quality health services	• Identification of which research questions most urgently need addressing in consultation and partnership with patients, service users, carers, health and care workers, service managers, and researchers • Commissioned funding calls for specific research questions

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Governance structures with defined responsibilities to identify and remove barriers to access to health services and ensure quality of health services	• Quality assurance unit • Process improvement department tasked with improving access to, quality of, and effectiveness of care • Regional government monitoring health services and the ministry of health retaining regulatory functions and defining national health standards and norms • The Licensing Agency under the Ministry of Health as the sole body responsible for licensing all health care facilities in both the public and private sectors (Armenia) • Dedicated national or regional support structures to support local-level actors, for example, local health authorities receive technical and scientific support from regional agencies
2. Legal, regulatory and policy frameworks for ensuring the quality of and equal access to health services, including consideration of vulnerable and marginalized populations	• National Strategy for Quality Improvement in Health Care (South Africa) • National Core Standards for Health Establishments (South Africa)
3. Integrated information systems that support the monitoring and evaluation of population health status and health system performance	• Interoperability of information systems, which enables different systems to connect and exchange data with each other, including information system with electronic health records on patient care, health facility data, surveillance data, census data, population surveys, vital event records, human resource records, financial data, infrastructure data, and logistics and supply data • Tracking hospital-acquired infections and preventable adverse effects built into existing hospital information system
4. Mechanisms coordinating services delivered between service levels, organizations, private providers and NGOs	• Coordination between the local health departments to ensure that there is no duplication of services or competition for revenue streams • Partnership with other health care providers to create a coordinated safety net system providing comprehensive health care to low-income, uninsured county residents • Coordination of health service provision for vulnerable populations in fragile, conflict-affected and vulnerable settings among public health services providers, NGOs, and other humanitarian and development organizations

Public health system enablers (continued)	Examples (continued)
5. Availability and accessibility of adequate financial resources dedicated to delivering and accessing equitable and quality health services	• Allocation and protection of sufficient funds for primary health care • Mobilization of additional pooled public funding to make basic essential primary care free at the point of use • Earmarking budgetary resources as a means of targeting the socially vulnerable populations and socially important diseases
6. Availability and accessibility of adequate technologies, medicines and supplies, laboratory resources, and appropriate public health and health and social care infrastructure in support of delivering and accessing equitable and quality health services	• Increasing number of primary care points to reduce time taken to reach a primary care facility • Stockpile of essential medicines and supplies at all primary care points • Cold chain capacity in primary care facilities to enable delivery of essential health services
7. Adequate and competent health workforce in support of delivering and accessing equitable and quality health services	• Inclusion of quality of care as a priority in training health workers • Integration of health equity component in public health workforce training • Training of health workforce on the integration of services that comprehensively address the determinants of health
8. Mechanisms that enable effective participation of communities, social actors and civil society in support of delivering and accessing equitable and quality health services	• Routine surveys to capture population feedback on health services, to enable and support communities in the articulation of their views and concerns about health and well-being • Patient-completed safety checklists as a patient empowerment tool for patient safety • Community toolbox for community engagement and building of trust and good relationships between the government, service providers and communities • Integration of community scorecards, as a social accountability mechanism, into planning to strengthen community monitoring of health service delivery

EPHF 11

Public health research, evaluation and knowledge: Advancing public health research and knowledge development

Description

This activity involves advancing operational public health research in support of evidence-based decision-making at all levels by developing the evidence base for public health policies, services, interventions and activities, and developing and reviewing new insights into and innovative solutions for public health issues. Research can include epidemiological research; research on the wider determinants of health; health system and services research; research on sectoral and cross-sectoral influences on health and well-being and health system functioning and performance; health economics, including behavioral economics; and behavioral and social science research and analysis. It also involves development of research infrastructure (including formative, intervention, implementation science and policy research) across public health to better enable community participation and complement biomedical approaches.

Subfunctions include:

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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Ongoing and systematic surveillance of population health, health systems and other related aspects to generate public health data, including health status, health-related behaviors, disease incidence and prevalence, hazards and threats, and health system performance	• Health system performance assessment • Surveillance of behavioral risk factors • Population health needs assessment • Community-based surveillance • Facility-based assessments of service provision, availability and client satisfaction
2. Analysis of available evidence to support evidence-based decision-making at all levels and in all contexts	• Interpretation of raw data gathered from population surveys, disease registries, hospital records and other sources to support public health planning • Development of policy briefs, white papers and other publications to inform policy-makers and senior decision-makers
3. Provision of multidisciplinary behavioral and social science strategic analysis and advice based on data, evidence and theory to inform policy- and decision-making	• Provide expert and rapid behavioral insights advice for policymaking including: problem definition; identification of barriers, interventions and research options; and rapid review and recommendations for improvement of policies, programs, services, or communications. • Define and diagnose behaviors and their influences through evidence synthesis and participatory primary mixed-methods research. • Co-design and pilot context-appropriate interventions using data, evidence and theory to select policy options, modes of delivery and behavior change techniques. • Evaluate impact, process and value for money including experimental and quasi-experimental approaches where appropriate. • Enable communities, stakeholders and users to contribute to policymaking 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.
4. Knowledge transfer and sharing	• Utilization and translation of research results in support of evidence-informed policy and planning, for example, publications in the local language, policy briefs and policy advocacy • Information campaign targeting specific populations to increase uptake of evidence-based health interventions • Social engagement in knowledge transfer

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Legal and regulatory frameworks and standards that support evidence-based and ethical public health research	• Maintenance of scientific and ethical standards in research, for example, codes of conduct
2. Development of public health research agenda aligned with population health needs and health system priorities	• Strategies for developing 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 (for example, universities) • Population health needs assessment to inform national public health research priorities
3. Mechanisms for promoting alignment between research, innovations, public health research priorities, decision-making and public health practices	• 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-based policy, and to jointly set the public health research agenda • Agreement between the government and private sector on public health research and facilitation of uptake of innovations • National Institute for Health and Care Research in partnership with patients, service users, carers and communities to improve the relevance, quality and impact of public health research (United Kingdom)
4. Integration of research activities into public health education and training, public health institutions and practices	• Fostering strong relationship between the government and local university to perform research and program evaluation • Inclusion of research activities in public health education and continuous training
5. Multisectoral collaboration in support of public health research	• Multidisciplinary partnerships between public health schools and institutes and other research centers and academic institutions in other sectors • Public–private partnerships for public health research, including in health technologies and innovations and clinical trials
6. Adequate financial resources for public health research	• Funding available for research in schools of public health and research institutes
7. Information systems collecting and storing data in support of public health research	• Maintenance of and access to health indicator databases for researchers, as appropriate

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

Description

This activity involves the means, processes and action to assess and promote the equitable provision of, access to and rational use of essential medicines and other medical products and health technologies (for example, vaccines, medicines, diagnostics, medical and surgical equipment and devices, information and communication technologies for health) that are safe, effective and ethical.

Subfunctions include:

- **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

Public health services that support the implementation of this public health function include the following.

Public health services	Examples
1. Development of strategies, guidelines, standards and regulations for the introduction and rational and equitable use of medicines and other medical products and health technologies	• Development of list of essential medicines for the government and public health facilities to procure and prescribe • Development of national patient safety strategies • Development and strengthening of regulatory system for medical products pre-market, on the market and post-market • Development of standards and guidelines regarding the introduction and use of novel surgical devices and products
2. Utilizing appropriate, accessible and safe medicines and other medical products and health technologies in delivering health services	• Providing tele-consultation options to hard-to-reach populations • Raising awareness of and providing assistive technology to people who are in need • Stockpiling and providing essential medicines in all primary health care facilities
3. Monitoring and evaluation of the provision and rational use of medical products and health technologies, with respect to safety, effectiveness and equity	• Monitoring of effectiveness and safety of COVID-19 vaccination • Surveillance, diagnosis and treatment of multidrug-resistant tuberculosis cases in community-based programmatic management of multidrug-resistant tuberculosis • Routine monitoring of medicine prices, availability and affordability • Health technology assessment • Monitoring the introduction of surgical products into practice

Key public health system enablers that support the implementation of related public health services include the following.

Public health system enablers	Examples
1. Legal and regulatory frameworks and strategies that support the regulation and monitoring of the safety and efficacy of medicines and other medical products and health technologies	• Pharmacovigilance legislation • Data protection and privacy laws • Regulations on health technology assessment
2. Structures and mechanisms in the government supporting equitable access to and rational use of medicines and other medical products and health technologies	• National health technology committee • Multisectoral antimicrobial resistance committees • Health equity audits
3. Information systems supporting rational use of and equitable access to medicines and other medical products and health technologies	• Monitoring systems on availability and pricing of medicines • Systems for monitoring and quality control of surgical products at district hospitals
4. Integrated approach to the quantification, selection and provision of essential medicines and other medical products and health technologies to meet population health needs in all contexts	• Adaptation of WHO model lists of essential medicines to national contexts with defined criteria on selection of essential medicines • Quantification of the need for essential medicines and other health technologies, including to inform budget and procurement
5. Mechanisms for the procurement and distribution of essential medicines and other medical products and health technologies based on population health needs in all contexts	• Public sector procurement and distribution supported by dedicated budget line for essential medicines in government's budget at all levels • 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 level
6. Mechanisms for promoting alignment of research, innovation, public health research priorities, decision-making and public health practices	• 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 • Agreement between the government and private sector on public health research and facilitation of uptake of innovations

Annex 2. Methodological approach of literature review and analysis for unpacking the essential public health functions

1. **Review objective**

The objective was to define subfunctions, public health services and system inputs to deliver public health functions in reference to the EPHF list that are common in the global context and applicable for country contextualization. A literature review underpinned by a search of peer-reviewed literature in databases and grey literature in key actors' websites was conducted.

2. **Literature search and review for unpacking subfunctions, public health services and system inputs**

Peer-reviewed literature search underpinned by systematic search

Database: MEDLINE (accessed through PubMed)

Search criteria included key words only in title, full text available, English language, publication date: 1/1/2012 to present (i.e. 30/9/2022)

Search terms included:

- public health function*[Title]
- public health operation*[Title]
- public health activit*[Title]
- public health capacit*[Title]
- public health service*[Title].

Grey literature search underpinned by systematic search

Sites searched included: [1]

- Institutional Repository for Information Sharing (IRIS) of the World Health Organization (WHO)
- IRIS of the Pan American Health Organization (PAHO)
- Publications Office of the European Union
- Website of the Africa Centers for Disease Control and Prevention
- OpenGrey.

Key words for search in literature's title, abstract or keywords included:

- public health function(s)
- public health operation(s)
- public health service(s)
- population health service(s)
- public health activity/activities
- public health capacity/capacities
- public health system(s)
- public health structure(s)
- public health planning
- public health strengthening
- public health workforce/worker(s)
- public health institute(s).

1 The original plan included a literature search of the website of the United States Centers for Disease Control and Prevention (CDC). However, refining search results is not well supported on the website, and there were too many results returned after applying the search and filter for key words. Therefore, CDC sites were not included in the first step of the systematic search. Instead, key documents related to EPHFs from the CDC were identified and shared by experts; targeted searches on specific areas were conducted based on the need to identify country-level examples of public health services and system inputs.

Inclusion criteria included the following.

- Literature with a focus on the set-up of overall public health functions at the national level or an overview of a specific public health function:
  - frameworks and assessment tools of EPHF and its equivalent concepts (for example, essential public health operations, essential public health services);
  - technical reports on status of EPHFs and equivalent concepts;
  - documents related to operational scope of public health;
  - documents describing public health systems and functions in specific national contexts in selected countries, for example, scope of public health services; set-up of national public health governance structures; roles or functions of public health agencies; terms of reference of public health practitioners, doctors and specialists; district health officers and managers; non-health sector personnel.
- Literature with explicit policy and planning indications for high-level public health planning.
- Literature published between 2012 and 2022.
- Full text available and in English.

Exclusion criteria included the following.

- Literature with a focus on a specific disease condition, health service, health risk or health hazard.
- Literature with a focus on public health functions at supranational level.
- Publication earlier than 2012.

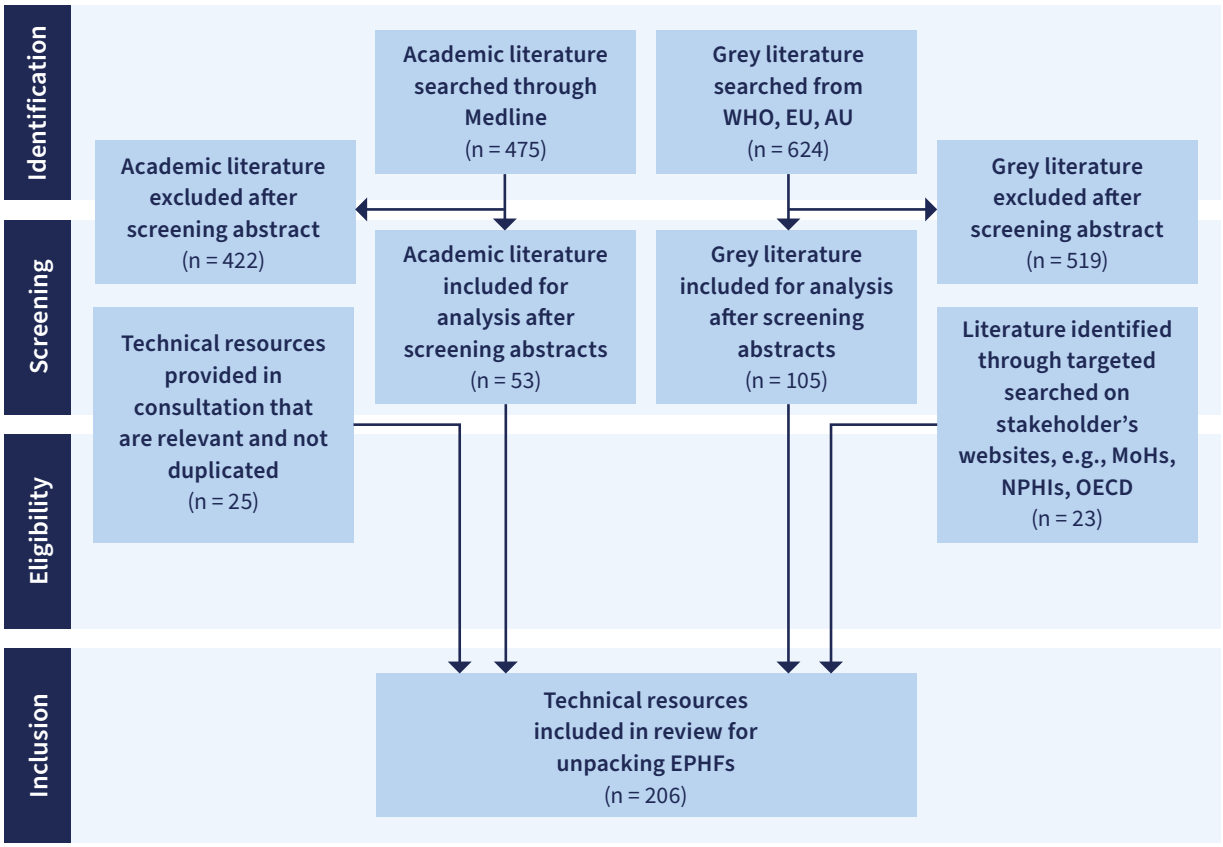
Targeted search and consultations

Academic and grey literature searches were complemented by a targeted search on websites of ministries of health, national public health institutes and other national health authorities, as well as technical resources provided during consultation with experts.

Literature search and inclusion results

The PRISMA flow diagram for selecting, screening and including literature to review for unpacking EPHFs is shown in Figure A2.1.

Figure A2.1 **PRISMA flow diagram of literature collection, screening and inclusion process for unpacking essential public health functions**



AU: African Union; EPHF: essential public health function; EU: European Union; MoH: ministry of health; NPHI: national public health institute; OECD: Organisation for Economic Co-operation and Development; PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses; WHO: World Health Organization.

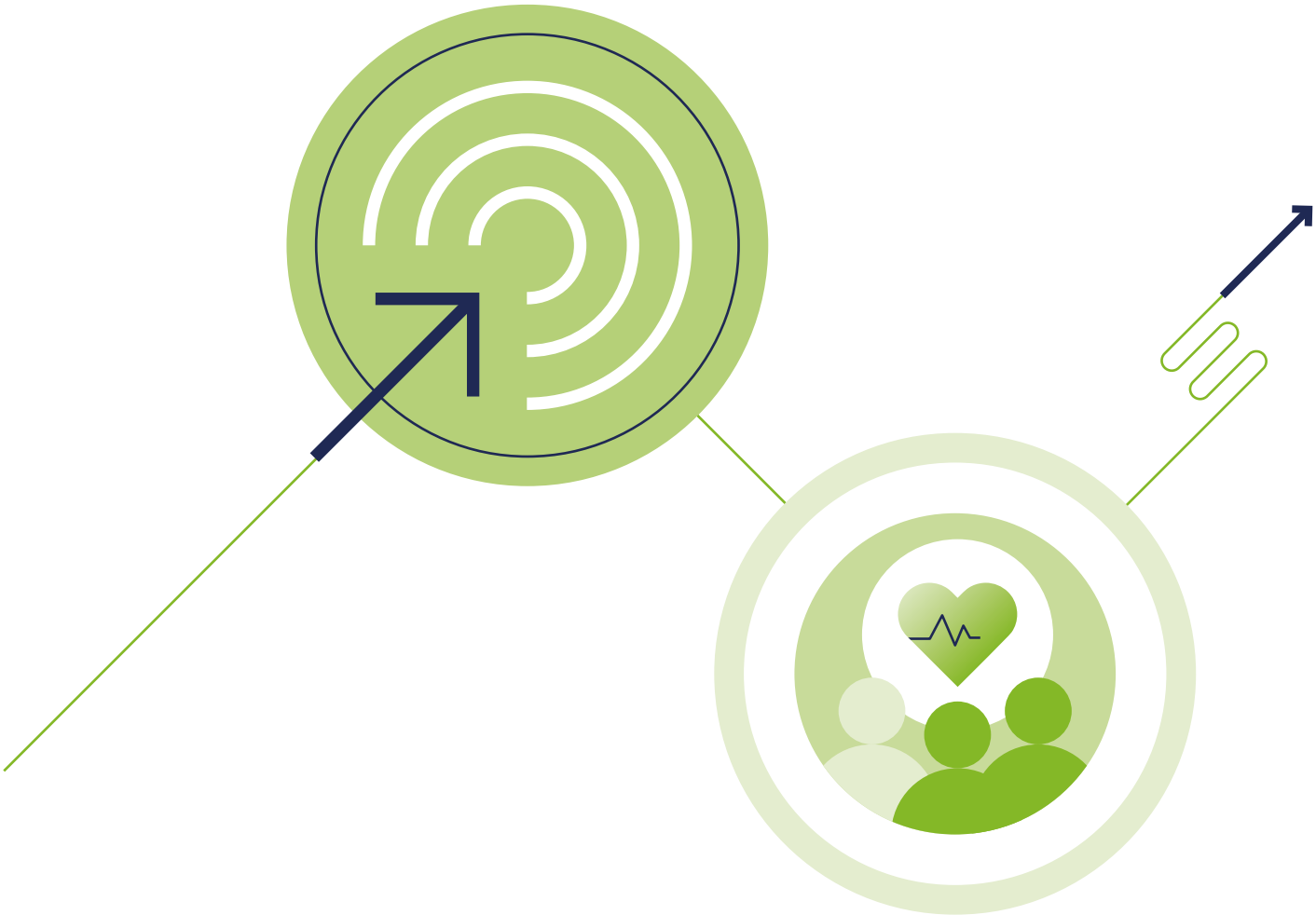
Guiding questions to literature analysis

All documents were reviewed using the guiding questions:

- What key actions are included in each of the EPHF activities?
- What public health services are delivered in relation to each of the EPHFs according to the operational definition presented?
- What inputs, processes and means or system enablers are necessary to deliver the public health services and functions identified?

3. **Literature search and review to identify examples of public health services and system inputs**

After identifying public health services and system inputs under each public health function, a more targeted search and review of literature was conducted to fill the gaps in providing examples of public health services and service inputs. Websites of national governmental agencies, national health system review series conducted by WHO regional offices, and UHC Compendium were searched and reviewed with the purpose of identifying examples.



Annex 3. List of literature and documents reviewed to inform unpacking the essential public health functions

Resources from the World Health Organization

Asia Pacific Observatory on Health Systems and Policies. 2023. Health System in Transition Reviews (HiT) series. New Delhi: World Health Organization Regional Office for South-East Asia (https://apo.who.int/publications/health-system-in-transition-reviews-hit).

Bjegovic-Mikanovic V, Czabanowska K, Flahault A, Otok R, Shortell S, Wisbaum W et al. 2014. Addressing needs in the public health workforce in Europe. Copenhagen: World Health Organization Regional Office for Europe, European Observatory on Health Systems and Policies.

European Observatory on Health Systems and Policies. 2023. Health system reviews (HiT series). Copenhagen: World Health Organization Regional Office for Europe (https://eurohealthobservatory.who.int/publications/health-systems-reviews).

Rechel B, Jakubowski E, McKee E, Nolte E. 2018. Organization and financing of public health services in Europe. Copenhagen: World Health Organization Regional Office for Europe, European Observatory on Health Systems and Policies.

Rechel B, Maresso A, Sagan A, Hernández-Quevedo C, Williams G, Richardson E et al. 2018. Organization and financing of public health services in Europe country reports. Copenhagen: World Health Organization Regional Office for Europe, European Observatory on Health Systems and Policies.

Șalaru I, Gheorghiță S, Ciobanu A, Tabuncic N, Obreja G, Caterinciuc N et al. 2012. Analysis of public health operations, services and activities in the Republic of Moldova. Copenhagen: World Health Organization Regional Office for Europe.

World Health Organization, Pan American Health Organization. 2020. The essential public health functions in the Americas: a renewal for the 21st century: conceptual framework and description. Washington (DC).

World Health Organization Regional Office for Africa. 2023. Health sector reviews: AFRO Region. Brazzaville: World Health Organization Regional Office for Africa (https://aho.afro.who.int/health-sector-reviews/af?ci=41).

World Health Organization Regional Office for the Eastern Mediterranean. 2016. Five years in action: strengthening public health in the Region and beyond. Cairo.

World Health Organization Regional Office for the Eastern Mediterranean. 2017. Assessment of essential public health functions in countries of the Eastern Mediterranean Region: assessment tool. Cairo.

World Health Organization Regional Office for Europe. 2012. Preliminary review of institutional models for delivering essential public health operations in Europe. Copenhagen.

World Health Organization Regional Office for Europe. 2012. Regional Committee for Europe, 62nd session. Sixty-second Regional Committee for Europe: Malta, 10–13 September 2012: European Action Plan for Strengthening Public Health Capacities and Services. Copenhagen.

World Health Organization Regional Office for Europe. 2012. Review of public health capacities and services in the European Region. Copenhagen.

World Health Organization Regional Office for Europe. 2014. The case for investing in public health: strengthening public health services and capacity,

a key pillar of the European regional health policy framework Health 2020: a public health summary report for EPHO 8. Copenhagen.

World Health Organization Regional Office for Europe. 2015. Self-assessment tool for the evaluation of essential public health operations in the WHO European Region. Copenhagen.

World Health Organization Regional Office for Europe. 2016. Regional Committee for Europe, 66th session. Sixty-sixth Regional Committee for Europe: Copenhagen, 12–15 September 2016: report on results of European Action Plan for Strengthening Public Health Capacities and Services surveys. Copenhagen.

World Health Organization Regional Office for Europe. 2018. Ensuring collaboration between primary health care and public health services. Copenhagen.

World Health Organization Regional Office for Europe. 2018. Strengthening the governance of public health services in the South-eastern Europe Health Network (SEEHN): Banja Luka, Bosnia and Herzegovina, 15 November 2017. Copenhagen.

World Health Organization Regional Office for Europe. 2018. Technical report on the self-assessment of essential public health operations in the Republic of Armenia. Copenhagen.

World Health Organization Regional Office for Europe. 2019. Action plan to improve public health preparedness and response in the WHO European Region 2018–2023. Copenhagen.

World Health Organization Regional Office for Europe. 2019. Strengthening the backbone of public health: health information. Copenhagen.

World Health Organization Regional Office for Europe. 2020. WHO-ASPHER competency framework for the public health workforce in the European Region. Copenhagen.

World Health Organization Regional Office for Europe. 2021. Essential public health operations in Slovenia: key findings and recommendations on strengthening public health capacities and services. Copenhagen.

World Health Organization Regional Office for Europe. 2021. Report on recommendations for the reform of public health services in the Kyrgyzstan. Copenhagen.

World Health Organization Regional Office for Europe. 2021. System change for better public health in North Macedonia: a roadmap: report of the public health retreat, Ohrid, 1–3 October 2019. Copenhagen.

World Health Organization Regional Office for Europe. 2022. Roadmap to professionalizing the public health workforce in the European Region. Copenhagen.

World Health Organization Regional Office for South-East Asia. 2012. Strengthening of national public health systems for emerging health challenges. New Delhi.

World Health Organization Regional Office for South-East Asia. 2014. Strengthening public health for human development. New Delhi.

World Health Organization Regional Office for South-East Asia. 2014. Strengthening public health in the South-East Asia Region. New Delhi.

World Health Organization Regional Office for the Western Pacific. 2012. Securing regional health though APSED: building sustainable capacity for managing emerging diseases and public health events: progress report 2012, rev. ed. Manila.

World Health Organization Regional Office for the Western Pacific. 2018. Health financing regional profile 2018: transitioning to integrated financing and service delivery of priority public health services. Manila.

World Health Organization Regional Office for the Western Pacific. 2018. Regional framework for action on transitioning to integrated financing of priority public health services in the Western Pacific. Manila.

Resources from other international and regional governmental or professional organizations

Africa Centres for Disease Control and Prevention. 2019. Framework for Development of National Public Health Institutes in Africa. Addis Ababa.

Africa Centres for Disease Control and Prevention. 2019. Providing a legal framework for a national public health institute (NPHI). Addis Ababa.

Africa Centres for Disease Control and Prevention. 2020.Framework for Public Health Workforce Development, 2020–2025. Addis Ababa.

Aluttis CA, Chiotan C, Michelsen M, Costongs C, Brand H, on behalf of the Public Health Capacity Consortium. 2013. Review of public health capacity in the EU. Luxembourg: European Commission Directorate-General for Health and Consumers.

Eastern Mediterranean Public Health Network. 2019. EMPHNET in Iraq: a growing partnership towards a strengthened public health system. Amman.

Eastern Mediterranean Public Health Network. 2023. Operationalization of the One Health approach in the Eastern Mediterranean Region. Amman.

Eastern Mediterranean Public Health Network. 2023. Responding to the challenge of non communicable diseases (NCDs) in the Eastern Mediterranean Region. Amman.

Eastern Mediterranean Public Health Network. 2023. Toward the integration of climate change action into health programs in the Eastern Mediterranean Region. Amman.

European Centre for Disease Prevention and Control. 2017. Public health emergency preparedness: core competencies for EU Member States. Stockholm.

European Centre for Disease Prevention and Control. 2021. Digital technologies for key public health functions: results of an ECDC expert consultation, May/June 2021. Stockholm.

European Commission Directorate-General for Health and Food Safety. 2020. The organisation of resilient health and social care following the COVID-19 pandemic: opinion of the Expert Panel on effective ways of investing in health (EXPH). Luxembourg.

European Committee of the Regions, Soldi R, Odone C. 2017. The management of health systems in the EU Member States: the role of local and regional authorities. Luxembourg: Committee of the Regions.

International Association of National Public Health Institutes. 2007. Framework for the creation and development of national public health institutes. Paris.

Organisation for Economic Co-operation and Development. 2019. OECD Reviews of Health Systems series. Paris (https://www.oecd-ilibrary.org/social-issues-migration-health/oecd-reviews-of-health-systems_19901410).

Organisation for Economic Co-operation and Development.2019. OECD Reviews of Public Health: Chile: a healthier tomorrow. Paris (https://doi.org/10.1787/9789264309593-en).

Organisation for Economic Co-operation and Development. 2019. OECD Reviews of Public Health: Japan: a healthier tomorrow. Paris (https://doi.org/10.1787/9789264311602-en).

Organisation for Economic Co-operation and Development. 2020. OECD Reviews of Public Health: Korea: a healthier tomorrow. Paris (https://doi.org/10.1787/be2b7063-en).

Organisation for Economic Co-operation and Development. 2020. OECD Reviews of Public Health: Latvia: a healthier tomorrow. Paris (https://doi.org/10.1787/e9f33098-en).

Pushkarev N, Godfrey F, Marschang S, Massay-Kosubek Z, Natsis Y, Borg AM et al. 2019. EU Public Health Policies: state of play, current and future challenges. Study for the Committee on the Environment, Public Health and Food Safety of the European Parliament, Policy Department for Economic, Scientific and Quality of Life Policies. Luxembourg: European Parliament.

Sixsmith J, Doyle P, D'Eath M, Barry MM. 2014. Health communication and its role in the prevention and control of communicable diseases in Europe: current evidence, practice and future developments. Stockholm: European Centre for Disease Prevention and Control.

Resources from Member States

Canadian Public Health Association. 2023. Strengthening public health systems in Canada. Ottawa (https://www.cpha.ca/strengthening-public-health-systems-canada).

Croatian Institute of Public Health: Division for Public Health (https://www.hzjz.hr/en/division-for-public-health/).

Faculty of Public Health. 2021. Functions and standards of a public health system. London.

Gesundheit Österreich GmbH. 2017. Österreichischer Strukturplan Gesundheit (ÖSG) [Austrian Health Structure Plan] (https://goeg.at/OESG_2017).

Government of Canada. 2023. Canada's health care system. Ottawa (https://www.canada.ca/en/health-canada/services/canada-health-care-system.html).

Government of Finland. 2008. Act on the National Institute for Health and Welfare (https://www.finlex.fi/fi/laki/ajantasa/2008/20080668).

Health Service Executive (Ireland). 2022. National Service Plan 2022. Dublin.

Institute of Epidemiology, Disease Control and Research of Bangladesh (https://www.iedcr.gov.bd/).

Istituto Superiore di Sanità, Italy (https://www.iss.it/en/).

National Development and Reform Commission of the People's Republic of China. 2021. 国家基本公共服务标准 *(2021* 年版*)* [Standards of national basic public services *(2021 edition)*]. Beijing (https://www.ndrc.gov.cn/xxgk/zcfb/tz/202104/P020210420570028018881.pdf).

National Health Commission of the People's Republic of China. 2017. 国家基本公共卫生服务规范 (第三版) [Standards of national basic public health services *(3rd edition)*]. Beijing (http://www.nhc.gov.cn/ewebeditor/uploadfile/2017/04/20170417104506514.pdf).

National Institute of Health Peru (https://web.ins.gob.pe/).

National Institute for Public Health and the Environment, Kingdom of the Netherlands. RIVM (https://www.rivm.nl/en/about-rivm/rivm).

National Public Health Institute of Albania (https://www.ishp.gov.al/funksionet-e-ishp/).

Norwegian Institute of Public Health (https://www.fhi.no/en/about/this-is-the-norwegian-institute-of-public-health/).

Public Health Agency of Canada. 2021. A vision to transform Canada's public health system. The Chief Public Health Officer of Canada's Report on the State of Public Health in Canada 2021. Ottawa (https://www.canada.ca/en/public-health/corporate/publications/chief-public-health-officer-reports-state-public-health-canada/state-public-health-canada-2021.html).

Public Health Agency of Sweden (https://www.folkhalsomyndigheten.se/the-public-health-agency-of-sweden/).

Public Health England. London: Government of the United Kingdom (https://www.gov.uk/government/organisations/public-health-england).

Public Health England. 2022. Annual report and accounts 2020/21: for the period 1 April 2020 to 31 March 2021. London.

Robert Koch Institute (https://www.rki.de/EN/Content/Institute/DepartmentsUnits/DepartmentsUnits_node.html).

Statens Serum Institut, Denmark (https://en.ssi.dk/about-us).

United States Centers for Disease Control and Prevention. 2020. The 10 essential public health services: to protect and promote the health of all people in all communities. Atlanta.

Zambia National Public Health Institute (http://znphi.co.zm/).

Academic literature

Ádány R, Kósa K, Sándor J, Papp M, Fürjes G. General practitioners' cluster: a model to reorient primary health care to public health services. Eur J Public Health. 2013;23*(4)*:529–30. doi:10.1093/eurpub/ckt095.

Alwan A, Puska P, Siddiqi S. Essential public health functions for countries of the Eastern Mediterranean Region: what are they and what benefits do they offer? East Mediterr Health J. 2016;21*(12)*:859–60. doi:10.26719/2015.21.12.859.

Alwan A, Shideed O, Siddiqi S. Essential public health functions: the experience of the Eastern Mediterranean Region. East Mediterr Health J. 2016;22*(9)*:694–700. doi:10.26719/2016.22.9.694.

Ashton JR. The state of public health services in England: why hospital physicians should be worried. Clin Med (Lond). 2016;16*(4)*:309–10. doi:10.7861/clinmedicine.16-4-309.

Awuor L, Meldrum R, Liberda EN. Institutional engagement practices as barriers to public health capacity in climate change policy discourse: lessons from the Canadian province of Ontario. Int J Environ Res Public Health. 2020;17*(17)*:6338. doi:10.3390/ijerph1776338.

Báscolo E, Houghton N, Del Riego A, Fitzgerald J. A renewed framework for the essential public health functions in the Americas. Rev Panam Salud Publica. 2020;44:e119. doi:10.26633/RPSP.2020.119.

Báscolo E, Houghton N, Del Riego A, Fitzgerald J, Jarboe R. Contributions of the new framework for essential public health functions to addressing the COVID-19 pandemic. Am J Public Health. 2022;112(S6):S615–20. doi:10.2105/AJPH.2022.306750.

Bashier H, Ikram A, Khan MA, Baig M, Al Gunaid M, Al Nsour M et al. The anticipated future of public health services post COVID-19: viewpoint. JMIR Public Health Surveill. 2021;7*(6)*:e26267. doi:10.2196/26267.

Bekemeier B, Park S, Whitman G. Challenges and lessons learned in promoting adoption of standardized local public health service delivery data through the application of the Public Health Activities and Services Tracking model. J Am Med Inform Assoc. 2019;26*(12)*:1660–3. doi:10.1093/jamia/ocz160.

Bhattacharyya DS, Shafique S, Nowrin I, Anwar I. Challenges of performing essential public health functions by the physicians at leadership positions in peripheral level government health system in Bangladesh: a qualitative exploratory study. PLoS

One. 2022;17*(5)*:e0268026. doi:10.1371/journal.pone.0268026.

Bishai D, Sherry M, Pereira CC, Chicumbe S, Mbofana F, Boore A et al. Development and usefulness of a district health systems tool for performance improvement in essential public health functions in Botswana and Mozambique. J Public Health Manag Pract. 2016;22*(6)*:586–96. doi:10.1097/PHH.0000000000000407.

Broussard DL, Wallace ME, Richardson L, Theall KP. Building governmental public health capacity to advance health equity: conclusions based on an environmental scan of a local public health system. Health Equity. 2020;4*(1)*:362–5. doi:10.1089/heq.2019.0025.

Brunton CT, Smedley BD. Building public health capacity to advance equity. J Public Health Manag Pract. 2019;25*(4)*:411–2. doi:10.1097/PHH.0000000000001040.

Castrucci BC. The "10 essential public health services" is the common framework needed to communicate about public health. Am J Public Health. 2021;111*(4)*:598–9. doi:10.2105/AJPH.2021.306189.

Davis MV, Cilenti D, Gunther-Mohr C, Baker EL. Participatory research partnerships: addressing relevant public health system challenges. Public Health Rep. 2012;127*(2)*:230–5. doi:10.1177/003335491212700214.

Downey LH, Thomas WA Jr, Gaddam R, Scutchfield FD. The relationship between local public health agency characteristics and performance of partnership-related essential public health services. Health Promot Pract. 2013;14*(2)*:284–92. doi:10.1177/1524839912455332.

Edwards A, Zweigenthal V, Olivier J. Evidence map of knowledge translation strategies, outcomes, facilitators and barriers in African health systems. Health Res Policy Syst. 2019;17*(1)*:16. doi:10.1186/s12961-019-0419-0.

Fang G, Yang D, Wang L, Wang Z, Liang Y, Yang J. Experiences and challenges of implementing universal health coverage with China's national basic public health service program: literature review, regression analysis, and insider interviews. JMIR Public Health Surveill. 2022;8*(7)*:e31289. doi:10.2196/31289.

Foldspang A. Towards a public health profession: the roles of essential public health operations and lists of competences. Eur J Public Health. 2015;25*(3)*:361–2. doi:10.1093/eurpub/ckv007.

Francombe J, Ali GC, Gloinson ER, Feijao C, Morley KI, Gunashekar S et al. Assessing the implementation of digital innovations in response to the COVID-19 pandemic to address key public health functions: scoping review of academic and nonacademic literature. JMIR Public Health Surveill. 2022;8*(7)*:e34605. doi:10.2196/34605.

George M. Being fair in universal health coverage: prioritize public health services for low- and middle-income countries. Am J Public Health. 2016;106*(5)*:830–1. doi:10.2105/AJPH.2016.303145.

Gould DW, Lamb E, Dearth S, Collier K. Building state and local public health capacity in syndromic surveillance through an online community of practice. Public Health Rep. 2019;134*(3)*:223–7. doi:10.1177/0033354919828713.

Hamer MK, Mays GP. Public health systems and social services: breadth and depth of cross-sector collaboration. Am J Public Health. 2020;110(S2):S232–4. doi:10.2105/AJPH.2020.305694.

Hogg RA, Mays GP, Mamaril CB. Hospital contributions to the delivery of public health activities in US metropolitan areas: national and longitudinal trends. Am J Public Health. 2015;105*(8)*:1646–52. doi:10.2105/AJPH.2015.302563.

Huang W, Long H, Li J, Tao S, Zheng P, Tang S et al. Delivery of public health services by community health workers (CHWs) in primary health care settings in China: a systematic review *(1996–2016)*. Glob Health Res Policy. 2018;3:18. doi:10.1186/s41256-018-0072-0.

Hunter DJ, Littlejohns P, Weale A. Reforming the public health system in England. Lancet Public Health. 2022;7*(9)*:e797–800. doi:10.1016/S2468-2667*(22)*00199-2.

Jaca A, Malinga T, Iwu-Jaja CJ, Nnaji CA, Okeibunor JC, Kamuya D et al. Strengthening the health system as a strategy to achieving a universal health coverage in underprivileged communities in Africa: a scoping review. Int J Environ Res Public Health. 2022;19*(1)*:587. doi:10.3390/ijerph19010587.

JAMA Network. The legal foundations of public health functions. JAMA. 2019;322*(13)*:1319. doi:10.1001/jama.2018.15539.

Jarrah S, Khaldun J, Sellers K, Rich N. Bringing the essential public health services to life. J Public Health Manag Pract. 2021;27*(1)*:97–8. doi:10.1097/PHH.0000000000001298.

Jarvis T, Scott F, El-Jardali F, Alvarez E. Defining and classifying public health systems: a critical interpretive synthesis. Health Res Policy Syst. 2020;18*(1)*:68. doi:10.1186/s12961-020-00583-z.

Kakkar M, Abbas SS, Kumar A, Hussain MA, Sharma K, Bhatt PM et al. Veterinary public health capacity-building in India: a grim reflection of the developing world's underpreparedness to address zoonotic risks. WHO South East Asia J Public Health. 2013;2*(3)*:187–91. doi:10.4103/2224-3151.206767.

Khatun MM, Islam MA, Rahman MM. Current status of veterinary public health activities in Bangladesh and its future plans. BMC Vet Res. 2019;15*(1)*:164. doi:10.1186/s12917-019-1879-8.

Kolbe LJ. Federal public health service: in retrospect and prospects. Health Educ Behav. 2016;43*(5)*:509–17. doi:10.1177/1090198116667932.

Lebrun LA, Shi L, Chowdhury J, Sripipatana A, Zhu J, Sharma R et al. Primary care and public health activities in select US health centers: documenting successes, barriers, and lessons learned. Am J Public Health. 2012;102(Suppl. 3):S383–91. doi:10.2105/AJPH.2012.300679.

Mainzer HM, Kruger J, Mahany M. Essential public health services framework: use for rebuilding communities. Am J Public Health. 2019;109(S4):S271–3. doi:10.2105/AJPH.2019.305261.

Martin-Moreno JM, Harris M, Jakubowski E, Kluge H. Defining and assessing public health functions: a global analysis. Annu Rev Public Health. 2016;37:335–55. doi:10.1146/annurev-publhealth-032315-021429.

McCullough JM, Eisen-Cohen E, Lott B. Barriers and facilitators to intraorganizational collaboration in public health: relational coordination across public health services targeting individuals and populations. Health Care Manage Rev. 2020;45*(1)*:60–72. doi:10.1097/HMR.0000000000000203.

Otok R, Foldspang A. Main competences and skills to perform essential public health operations, offered by schools of public health in four European countries: a short pilot report. Int J Public Health. 2016;61*(6)*:633–9. doi:10.1007/s00038-016-0870-4.

Palmer S, Coleman G. Building national public health capacity for managing chemical events: a case study of the development of health protection services in the United Kingdom. J Public Health Policy. 2013;34*(2)*:213–25. doi:10.1057/jphp.2013.5.

Qiu W, Chu C, Wang K, Meng Y, Yang Y, Mao A. Collaboration and cooperation of public health service management in China. Disaster Med Public Health Prep. 2021;15*(2)*:191–7. doi:10.1017/dmp.2019.142.

Queenan JA, Birtwhistle R, Drummond N. Supporting primary care public health functions. Can Fam Physician. 2016;62*(7)*:603.

Rosenfeld EL, Binder S, Brush CA, Whitney EAS, Jarvis D, Seib K et al. National public health institute legal framework: a tool to build public health capacity. Health Secur. 2020;18(S1):S43–52. doi:10.1089/hs.2019.0093.

Safi M, Bertram ML, Gulis G. Assessing delivery of selected public health operations via essential public health operation framework. Int J Environ Res Public Health. 2020;17*(17)*:6435. doi:10.3390/ijerph17176435.

Sándor J, Kósa K, Fürjes G, Papp M, Csordás Á, Rurik I et al. Public health services provided in the framework of general practitioners' clusters. Eur J Public Health. 2013;23*(4)*:530–2. doi:10.1093/eurpub/ckt096.

Sinclair A, Whitford A. Effects of participation and collaboration on perceived effectiveness of core public health functions. Am J Public Health. 2015;105*(8)*:1638–45. doi:10.2105/AJPH.2015.302586.

Singh SK, Murhekar M, Gupta S, Minh NNT, Sodha SV; Training Programme Working Group. Building public health capacity through India epidemic intelligence service and field epidemiology training programs in India. Indian J Public Health. 2021;65(Suppl. 1):S1–4. doi:10.4103/ijph.IJPH_1212_20.

Valdmanis V, DeNicola A, Bernet P. Public health capacity in the provision of health care services. Health Care Manag Sci. 2015;18*(4)*:475–82. doi:10.1007/s10729-014-9277-z.

Van den Broucke S. Strengthening public health capacity through a health promotion lens. Health Promot Int. 2017;32*(5)*:763–7. doi:10.1093/heapro/dax064.

Varghese J, Kutty VR. Governability framework for the evaluation and implementation of complex public health functions. Eval Rev. 2012;36*(4)*:303–19. doi:10.1177/0193841X12458674.

Verrecchia R, Dar O, Mohamed-Ahmed O, Squires N. Building operational public health capacity through collaborative networks of national public health institutes. BMJ Glob Health. 2019;4*(5)*:e001868. doi:10.1136/bmjgh-2019-001868.

Wallace M, Sharfstein J, Lessler J. Performance and priorities: a cross-sectional study of local health department approaches to essential public health services. Public Health Rep. 2020;135*(1)*:97–106. doi:10.1177/0033354919890862.

Wallar LE, McEwen SA, Sargeant JM, Mercer NJ, Garland SE, Papadopoulos A. Development of a tiered framework for public health capacity in Canada. Public Health. 2016;136:192–5. doi:10.1016/j.puhe.2016.03.009.

Walters JK, Sharma A, Malica E, Harrison R. Supporting efficiency improvement in public health systems: a rapid evidence synthesis. BMC Health Serv Res. 2022;22*(1)*:293. doi:10.1186/s12913-022-07694-z.

Wang L, Wang Z, Ma Q, Fang G, Yang J. The development and reform of public health in China from 1949 to 2019. Global Health. 2019;15*(1)*:45. doi:10.1186/s12992-019-0486-6.

Yuan B, Balabanova D, Gao J, Tang S, Guo Y. Strengthening public health services to achieve universal health coverage in China. BMJ. 2019;365:l2358. doi:10.1136/bmj.l2358.

Zhang P. Analysis of the public health functions of the Chinese government in the prevention and control of COVID-19. Risk Manag Healthc Policy. 2021;14:237–46. doi:10.2147/RMHP.S284251.

Zweigenthal VEM, Pick WM, London L. Stakeholders' perspectives on public health medicine in South Africa. PLoS One. 2019;14*(8)*:e0221447. doi:10.1371/journal.pone.0221447.

Zweigenthal VEM, Pick WM, London L. The speciality of public health medicine in South Africa: 1974–2021. Social History of Medicine. 2023;36*(1)*:164–89. doi:10.1093/shm/hkab125.

Annex 4. Consultation feedback form

Consultation feedback form

1. **The delineation of the 12 essential public health functions into subfunctions, public health services and system enablers was supported by reviews of both academic and grey literature to identify the key activities, services, inputs, processes and means to deliver each of the EPHFs in line with country contexts. This was complemented with a more targeted search of country examples for public health services and system inputs to inform operationalization, and expert consultations.**

   Is the methodological approach applied for "unpacking" the essential public health functions sound and sufficient?

   The detailed methodology for unpacking EPHFs can be found in Annexes 2 and 3.

Your feedback:

2. **In the absence of an internationally accepted definition for public health services, a working definition was developed as part of the exercise:**

   Public health services are those activities with a primary focus on population-level health impact while reducing risks and promoting health at the individual level. Public health services reflect a wide range of activities (**for example**, *policy and legislative work, health programs) that seek to address broader determinants of health and wider issues in the promotion and protection of health, including those across various sectors including health, agriculture, education, transport, etc.*

   While many of these services are delivered to individuals who derive a benefit, the impact of the service is evaluated primarily at the population level. Likewise, while many of these services are provided through clinical providers to individuals, they are primarily planned and designed to address population-level goals, objectives and needs rather than the needs of the individual receiving the service.

   Does this definition clearly and adequately define public health services in a way that supports the applications for policy, planning and practices?

Your feedback:

3. **To support and ensure the delivery of public health services, key system enablers for public health services were also defined as:**

   Public health system enablers refer to the infrastructures, capacities and institutional arrangements that are required to ensure the comprehensive and integrated delivery of public health services, within governments at all levels, health services delivery settings, allied sectors and communities.

   Is this definition of inputs clear in order to inform policy and planning to operationalize and promote public health in a national context?

Your feedback:

4. **The essential package of public health services and system enablers (in Chapter 5) was summarized and amalgamated based on the detailed unpacking of each EPHF, to help countries identify and prioritize public health actions in an integrated and comprehensive way.**

   Are there any public health services or system inputs missing from the essential list?

   Are the country examples for each public health service and system inputs appropriate and representative? Would you propose other examples that suit better?

   Is the current package of services and systems input adequate, practical, and adaptable at a national level?

Your feedback:

5. **The EPHFs, public health services and system enablers aim to support the recognition of the public health element where it is delivered within other sectors, services and programmes.**

   Does this package and phrasing of public health services and system inputs support the identification of the role of primary care, health emergencies and vertical programmes in the delivery of public health functions and services?

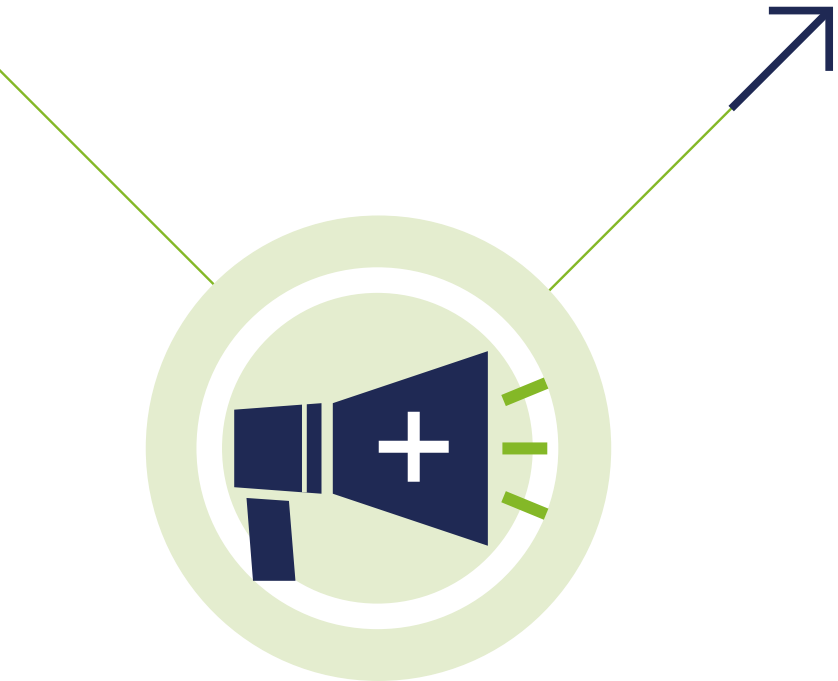
Your feedback:

6. **Part III proposed an operational approach to applying EPHFs – strategic and thematic review and development of public health capacities and stewardship to deliver EPHFs. These steps include planning and defining objectives; collecting and analysing data; formulating findings and recommendations; and implementing key areas for timely and effective addressing of gaps and recommendations informed by the strategic review. Chapter 6 outlines these steps and Chapter 7 describes examples of application to strengthen structures to lead, coordinate and deliver EPHFs, to develop health services to comprehensively cover public health services, and to develop the public health workforce.**

   Does the described approach to applying EPHFs include steps and contents adequate for adaptation and application in national contexts? If not, please provide your recommendations.

Your feedback:

7. Are there any key technical resources/documents that you would recommend us to review in support of defining public health services and system enablers?
Your feedback:
Additional comments and criticism are welcome.
Your feedback:



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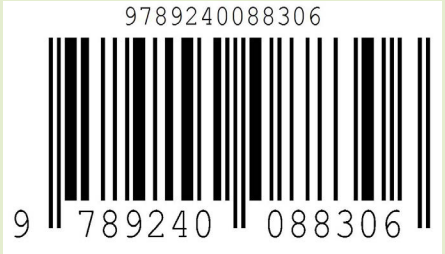
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