

# Primary health care measurement framework and indicators: monitoring health systems through a primary health care lens





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# Abbreviations

EPC	empowered people and communities
FMIS	facility management information system
GDP	gross domestic product
GPW 13	Thirteenth general programme of work 2019–2023
IHS	integrated health services
HMIS	health management information system
IHP+	International Health Partnership
IPC	infection prevention and control
ISCO	International Standard Classification of Occupations
M&E	monitoring and evaluation
MPA	multisectoral policy and action
PHC	primary health care
PHCPI	Primary Health Care Performance Initiative
RHIS	routine health information system
SCORE	survey population health risks; count births, deaths and causes of death; optimize health service data; review progress and performance; enable data use for policy and action
SDG	Sustainable Development Goal
TB	tuberculosis
UHC	universal health coverage
UNICEF	United Nations Children’s Fund
WASH	water, sanitation and hygiene
WHO	World Health Organization


# Background



## PHC as the main vehicle for achieving universal health coverage and the SDGs

Primary health care (PHC), as outlined in the 1978 Declaration of Alma-Ata and again 40 years later in the 2018 World Health Organization (WHO) and United Nations Children’s Fund (UNICEF) document *A vision for primary health care in the 21st century: towards universal health coverage and the Sustainable Development Goals*, is a whole-of-government and whole-of-society approach to health that combines three core components: multisectoral policy and action; empowered people and communities; and primary care and essential public health functions as the core of integrated health services (1, 2). By bringing together these three components, PHC creates the foundation for the achievement of universal health coverage (UHC) and the health-related Sustainable Development Goals (SDGs). A PHC approach can help countries equitably maximize the level and distribution of health and well-being by focusing on people’s needs and preferences (both as individuals and communities) as early as possible along the continuum of care – from health promotion and disease prevention to diagnosis, treatment, rehabilitation and palliative care – and as close as possible to people’s everyday environments.

In 2019, Member States reaffirmed their commitment to strengthening PHC towards the achievement of health for all without distinction of any kind through the *Declaration of Astana*, adopted at the Seventy-second World Health Assembly by resolution WHA72.2 on primary health care, and reaffirmed this in the 2019 Political Declaration of the High-level Meeting on Universal Health Coverage (3-5). More recent events have placed even greater pressures on countries to rapidly respond to a global pandemic while continuing to protect the health and well-being of its individuals, highlighting further the need to invest in strengthening resilient health systems based on a PHC foundation.



Additionally, primary health care accelerates progress towards current WHO goals and priorities, including: WHO's Thirteenth general programme of work 2019-2023, and its corresponding results framework with its triple goal focus on promoting health, keeping the world safe and serving the vulnerable; the global action plan for healthy lives and well-being for all, including the primary health care "accelerator"; WHO's framework on integrated people-centred health services; and WHO's framework for action for strengthening health systems to improve health outcomes and its six building blocks (6).

## PHC in the current global context

It is important to consider the role of PHC in the context of the COVID-19 pandemic and how it can help build resilient health care system. Much of the policy attention during the COVID-19 pandemic has focused on supplies and hospital capacities but less on the role of PHC. This initial lack of action and investment in PHC's role in supporting pandemic response has slowed effective response in many countries and has led to disruption of services, especially to vulnerable populations.

Strong PHC-oriented systems in some countries have been able to maintain access to essential services and minimize complications (and/or death) from COVID-19. PHC is fundamental for resilient health services and is critical for care provision during and beyond the COVID-19 pandemic. Moreover, from an economic perspective, the cost of PHC is comparatively low and can reduce the need for costly interventions.

## Monitoring and evaluation framework for PHC

To continuously strengthen PHC, countries must be able to assess how decisions, actions and investments are addressing the broader determinants of health while improving service coverage, financial risk protection, and ultimately the health of individuals and populations. As countries strive to reorient their health systems around the principles of PHC, this document responds to Member States' request in resolution WHA72.2 on primary health care for guidance to assess, track and monitor PHC performance to accelerate progress towards UHC and the health-related SDGs (3). The indicators and monitoring and evaluation conceptual framework presented in this document are based on and support the 14 levers of the Operational framework for primary health care (6). The indicators and framework have undergone technical review and multiple stages of consultation with countries, civil society, and leading PHC academics and experts. This document aligns with and advances WHO's work in monitoring UHC and the SDGs, including WHO's Thirteenth general programme of work, as well as other global health system monitoring efforts, thus minimizing the country-level reporting burden and reducing the risk of duplication. The result of this alignment and extensive consultation is a menu of indicators that countries can use and prioritize based on national context and health needs in an approach that is suited to the maturity of its health system.

# 1. Introduction

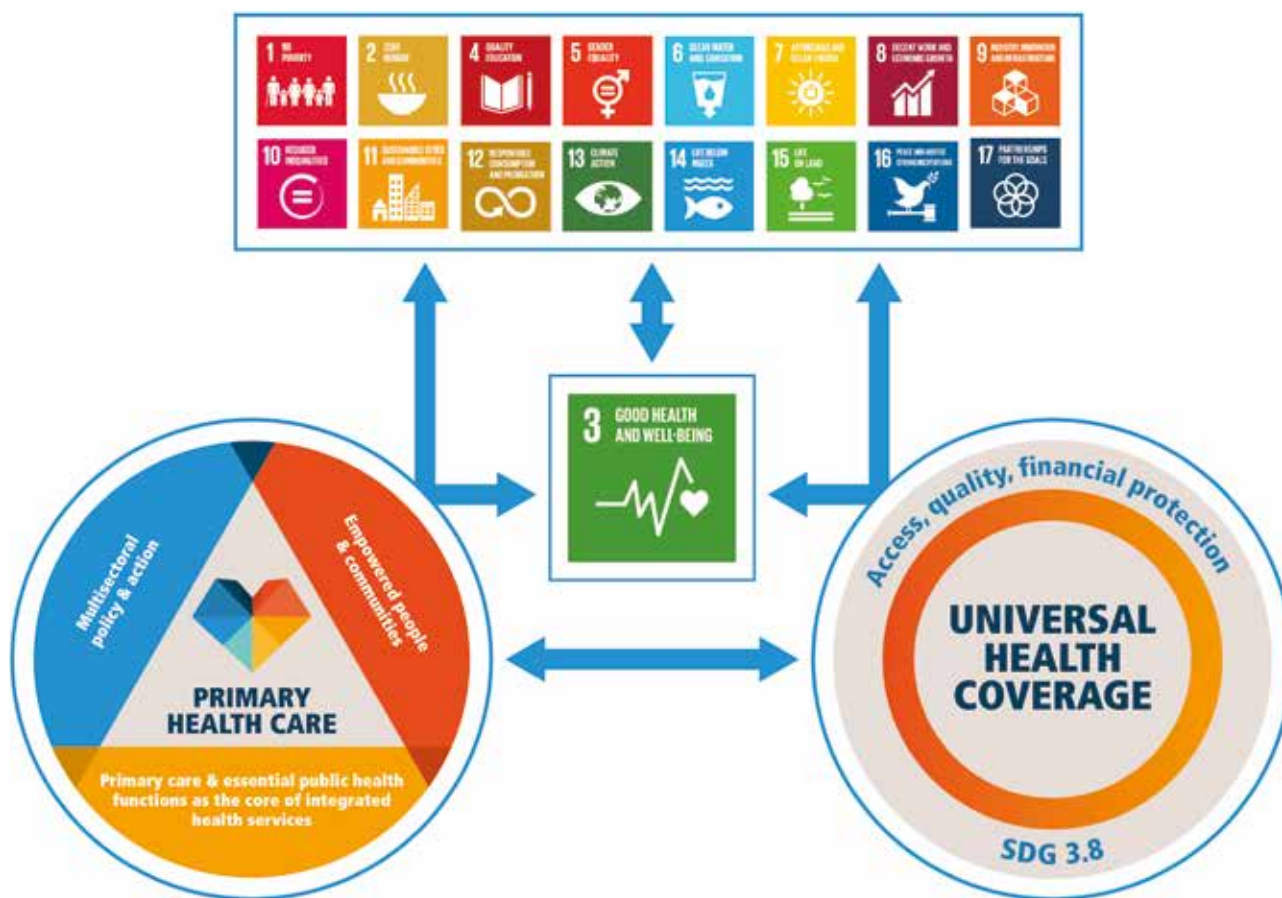


Building on previous World Health Assembly resolutions, through the Declaration of Astana, Member States reaffirmed their commitment to PHC as a cornerstone of sustainable health systems for the achievement of universal health coverage (UHC) and the health-related Sustainable Development Goals (SDGs), and committed to make “bold political choices for health across all sectors”, “build sustainable primary health care”, “empower individuals and communities”, and “align stakeholder support to national policies, strategies and plans” (3, 4).

The vision for PHC illustrated in **Figure 1** is a whole-of-society approach to health that equitably maximizes the distribution of health and well-being by bringing together three interrelated and complementary components:

1. **integrated health services with an emphasis on primary care and public health functions:** meeting health needs through comprehensive promotive, protective, preventive, curative, rehabilitative and palliative care throughout life, by prioritizing key health services through primary care and essential public health functions as central elements of integrated health services;
2. **multisectoral policy and action:** systematically addressing broader determinants of health (including social, economic and environmental factors, as well as individual characteristics and behaviours) through evidence-informed policies and actions across all sectors;
3. **empowered people and communities:** empowering individuals, families and communities to optimize their health as advocates of policies that promote and protect health and well-being, and as co-developers of health and social services (2).

Figure 1. PHC as the cornerstone for achieving UHC and the SDGs



Source: WHO and UNICEF (2).

## 1.1 Operational framework for primary health care levers

In response to World Health Assembly resolution WHA72.2 on primary health care, the *Operational framework for primary health care: transforming vision into action* was submitted to and noted by the Seventy-third World Health Assembly in 2020 (3, 6). The *Operational framework for PHC* provides a series of 14 interdependent, interrelated and mutually reinforcing levers for action, including four core strategic and 10 operational levers (Table 1). The levers expand on the health system building blocks, addressing key health sector elements that can help countries to accelerate progress on PHC. The core strategic levers are foundational prerequisites for action in all other operational levers. The *Operational framework for PHC* provides (a) a narrative description for each lever; (b) proposed actions and interventions that can be applied at national, subnational and community levels; and (c) a list of tools and resources for each lever.

**Table 1. PHC operational framework levels**

Title	Full description
<b>Core strategic levers</b>	
Political commitment and leadership	Political commitment and leadership that place PHC at the heart of efforts to achieve universal health coverage and recognize the broad contribution of PHC to the SDGs
Governance and policy frameworks	Governance structures, policy frameworks and regulations in support of PHC that build partnerships within and across sectors, and promote community leadership and mutual accountability
Funding and allocation of resources	Adequate financing for PHC that is mobilized and allocated to promote equity in access, to provide a platform and incentive environment to enable high-quality care and services, and to minimize financial hardship
Engagement of community and other stakeholders	Engagement of communities and other stakeholders from all sectors to define problems and solutions and prioritize actions through policy dialogue
<b>Operational levers</b>	
Models of care	Models of care that promote high-quality, people-centred primary care and essential public health functions as the core of integrated health services throughout the course of life
Primary health care workforce	Adequate quantity, competency levels and distribution of a committed multidisciplinary primary health care workforce that includes facility-, outreach-, and community-based health workers supported through effective management supervision and appropriate compensation
Physical infrastructure	Secure and accessible primary care facilities to provide effective services with reliable water, sanitation, waste disposal or recycling, telecommunications connectivity and a power supply, as well as transport systems that can connect patients to other care providers
Medicines and other health products	Availability and affordability of appropriate, safe, effective, high-quality medicines and other health products through transparent processes to improve health
Engagement with private sector providers	Sound partnership between public and private sectors for the delivery of integrated health services
Purchasing and payment systems	Purchasing and payment systems that foster a reorientation in models of care for the delivery of integrated health services with primary care and public health at the core
Digital technologies for health	Use of digital technologies for health in ways that facilitate access to care and service delivery, improve effectiveness and efficiency, and promote accountability
Systems for improving the quality of care	Systems at the local, subnational and national levels to continuously assess and improve the quality of integrated health services
Primary health care-oriented research	Research and knowledge management, including dissemination of lessons learned, as well as the use of knowledge to accelerate the scale-up of successful strategies to strengthen PHC-oriented systems
Monitoring and evaluation	Monitoring and evaluation through well-functioning health information systems that generate reliable data and support the use of information for improved decision-making and learning by local, national and global actors

Source: WHO and UNICEF (6).

## 1.2 The need for a PHC monitoring conceptual framework

In World Health Assembly resolution WHA72.2 on primary health care, Member States requested WHO to report regularly to the World Health Assembly on progress made in strengthening PHC globally, as part of all reporting on progress towards achieving UHC by 2030 (3).

The fourteenth lever of the *Operational framework for PHC* states that “monitoring, evaluation and review of health progress and performance are essential to ensure that priority actions and decisions are implemented as planned against agreed objectives and targets”.

This means that countries need to determine priorities, assess gaps, establish baselines and targets, and track progress and performance across the operational framework levers to strengthen the three PHC components – integrated health services with an emphasis on primary care and public health functions; multisectoral policy and action; and empowered people and communities (6).

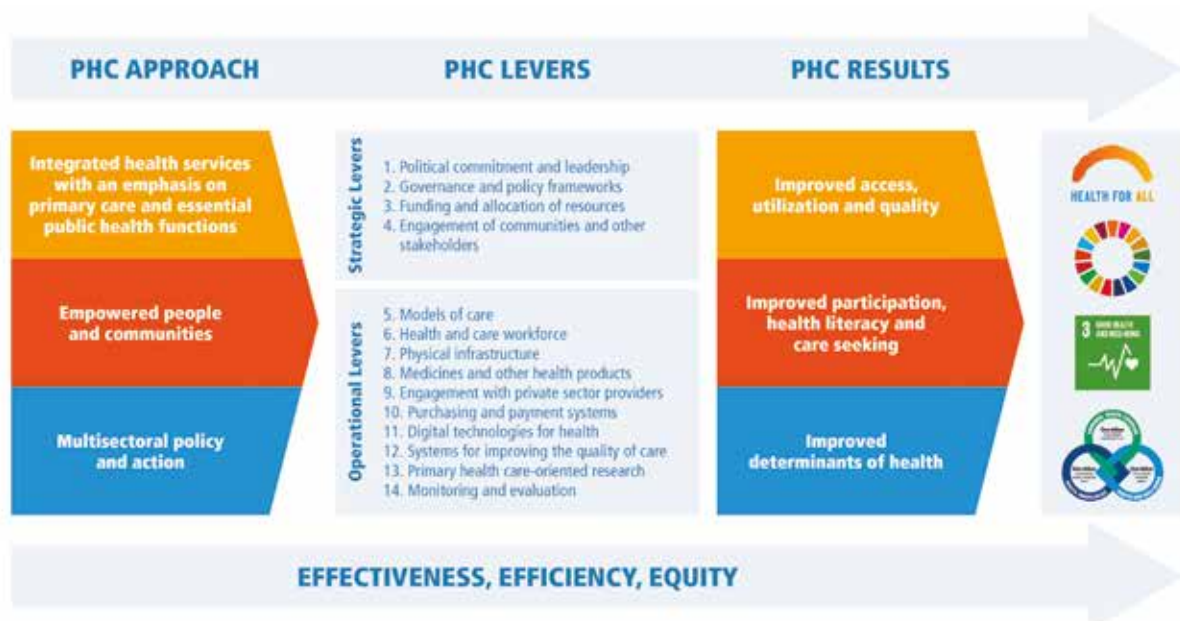
### **Operational Lever: Monitoring and Evaluation**

*“Monitoring, evaluation and review of health progress and performance are essential to ensure that priority actions and decisions are implemented as planned against agreed objectives and targets” – Operational framework for PHC*

The PHC monitoring conceptual framework is anchored on the PHC theory of change (Figure 2), which describes the causal pathways that connects the PHC approach to desired results. It outlines the relationship between the three components of PHC, the 14 levers for action and investment, and desired results, including (a) improved access, utilization and quality; (b) improved community participation, health literacy and care-seeking behaviours; (c) addressing the broader social, physical, environmental and commercial determinants of health; and (d) ultimately improving the health status and well-being of individuals and populations. In this way, the PHC theory of change predicates the achievement of UHC and the SDG targets on effective implementation of the PHC approach and levers.

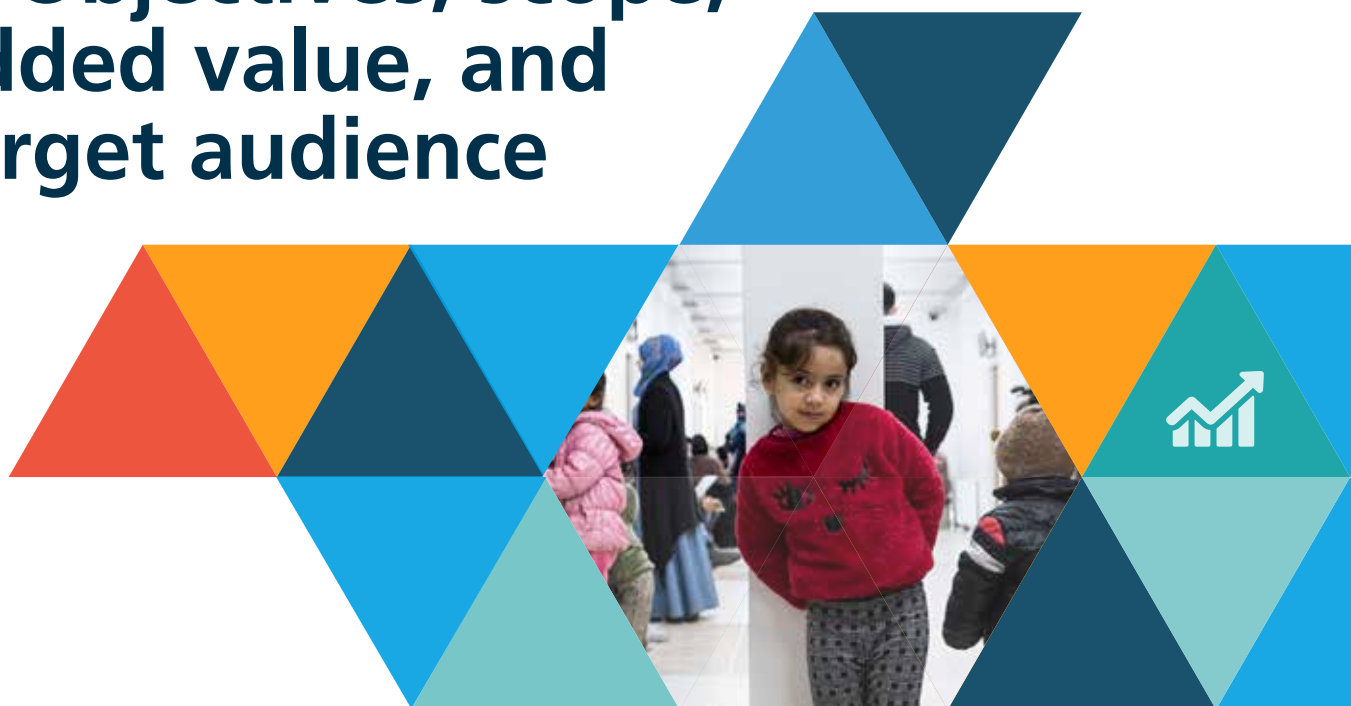
As the ultimate goal of strengthening PHC is health for all without distinction of any kind, countries need to be able to track how their decisions, actions and investments in PHC are addressing and making progress towards the desired results.

**Figure 2. PHC theory of change**



Source: Adapted from WHO and UNICEF (6).

## 2. Objectives, scope, added value, and target audience



### 2.1 Objectives

The main aim of the PHC monitoring guidance is to drive performance improvement in PHC at country level. The specific objectives are:

1. **to support Member States to assess, track and monitor PHC performance improvement** across the three components of PHC and 14 core strategic and operational levers within the context of national and subnational policy and planning processes;
2. **to align PHC monitoring within existing health system, UHC and SDG monitoring frameworks and guidance** in order to maximize and advance internationally comparable PHC performance monitoring and improvement efforts, fill data gaps, and minimize reporting burdens;
3. **to enable global tracking of the progress of WHO Member States in strengthening PHC towards the achievement of UHC by 2030** through the provision and alignment of a global set of indicators that can assist in cross-country review of aggregated data.

### 2.2 Scope

**Conceptual framework.** This guidance provides countries with a conceptual framework for measuring PHC performance that is based on a traditional logical results chain framework. The framework incorporates the key concepts and measurement domains of PHC covering the three components and 14 levers of PHC. It illustrates how investments in key elements of a PHC-oriented health system can lead to improved access to, availability of and quality of care, which in turn can contribute to the achievement of improved health outcomes and impact. As the ultimate goal of strengthening PHC is to accelerate progress towards UHC and the SDGs, the conceptual framework for monitoring PHC is integrated and aligned with UHC and SDG monitoring.



**Menu of indicators.** The PHC monitoring conceptual framework is underpinned by a menu of indicators to track and monitor progress in strengthening PHC-oriented health systems as an accelerator towards UHC and the SDGs and are presented in more detail in the accompanying technical specifications (Web Annex). The indicator menu provides sufficient depth and specificity to allow countries to select a subset of indicators to assess, plan, manage and prioritize areas for PHC strengthening at national, subnational, facility, community and individual levels. The intention is that national and subnational policy-makers and planners can choose a small set of indicator from the menu based on consideration of respective country contexts, gaps and priorities in order to develop country-tailored monitoring and evaluation plans for PHC and UHC. With this in mind, two tiers of indicators are proposed. Tier 1 indicators include those that are feasible to collect and track in most settings and Tier 2 indicators include those that are either not feasible to collect in most settings or require further methodological development.

Furthermore, in support of the request of Member States, by World Health Assembly resolution WHA72.2, to regularly report to the World Health Assembly on progress made in strengthening PHC towards achieving UHC, a limited subset of the Tier 1 indicators are also prioritized for reporting to WHO globally and regionally.

**PHC monitoring for improvement.** With a main aim of driving PHC performance improvement and within the context of national PHC reforms, countries can use the framework and indicators to assess and monitor gaps and needs in PHC in order to guide actions and investments in improving essential services to meet individual and population needs, enhancing service quality and safety improvement processes, tackling barriers to access to care with an emphasis on equity and “leaving no one behind”, and strengthening community empowerment and engagement mechanisms and multisectoral action. This can enable countries to take corrective actions, allocate resources appropriately and inform policy dialogues.

## 2.3 Added value of this framework

The PHC monitoring conceptual framework leverages existing global, regional and national monitoring efforts. As such, this framework adds value by:

- **providing a menu of indicators that countries can tailor to their specific contexts** to monitor progress across the three primary health care components (integrated health services and public health functions, community engagement and empowerment, multisectoral policies and action);
- **reducing fragmentation of country monitoring by providing a unified monitoring framework** for PHC- oriented health systems monitoring that is aligned with and linked to monitoring of UHC and the health related SDGs;
- **linking indicators to the strategic and operational levers of the *Operational Framework for PHC*** in a logical results chain that can be used to plan, target, monitor and inform key actions and interventions to accelerate progress in strengthening PHC-oriented health systems and ultimately drive improvement in health for all; and
- **providing a focus on underdeveloped measurement areas within a PHC-oriented health system**, in support of which this guidance provides recommendations for recently established areas of measurement, including indicators and measurement methods relating to policies and governance, community engagement, selection, organization, and management of health services to achieve a desired model of care, purchasing and payment systems, and systems for improving quality.

## 2.4 Target audience

This document is primarily intended to track and monitor PHC performance at national and subnational levels. Key target audiences include national- and district-level policy-makers and leaders in PHC.

Countries are encouraged to use this guidance, including its framework and menu of indicators, to develop a PHC monitoring and evaluation (M&E) plan that is tailored to country contexts and aligned with and embedded within existing country processes for monitoring and review of national health sector plans, strategies and accountability mechanisms.

This document can also be used by international partners, nongovernmental organizations, civil society and partners in supporting national and subnational efforts to measure and monitor PHC. It can also be used by specific health programme managers to track and monitor progress performance across specific health areas through a PHC lens.

# 3. PHC measurement framework and indicators



## 3.1 Conceptual framework

The PHC measurement conceptual framework builds on globally and regionally established conceptual and monitoring frameworks for health systems strengthening, PHC, and UHC. It was developed following a comprehensive review of existing frameworks, and draws extensively from the WHO and International Health Partnership (IHP+) common M&E framework (7), the WHO European Primary Health Care, Impact, Performance and Capacity Tool (8), the WHO framework on integrated people-centred health services (9), and the Primary Health Care Performance Initiative (PHCPI) conceptual framework (10) (see Box 1 in section below for full list of referenced frameworks).

The PHC monitoring conceptual framework supports the PHC theory of change and provides a logical results-based framework for monitoring performance and progress in PHC. It organizes the three key components and 14 levers of action for PHC into a results chain, or cascade, for effective PHC measurement and monitoring (Figure 3). The framework is organized in three ways:

- by results chain domain: structures, inputs, processes, outputs, outcomes and impact;
- by PHC domain to support PHC orientation of health systems: health system determinants, integrated service delivery (including public health functions and services for prevention, promotion, diagnosis, treatment, rehabilitation and palliation), and health system objectives (for example, improved service coverage and health status), with further breakdown into subdomains;
- by PHC monitoring dimensions: PHC capacities, PHC performance and Impact.

The framework illustrates the logical relationship between the domains, showing a causal pathway or direction of influence that link PHC structures, inputs, and processes (presented in the *Operational framework for PHC* through the 14 levers) to desired results (outputs, outcomes and impact). For example, the framework demonstrates how investments in PHC-oriented health system capacities in

structures and inputs (such as governance, health workforce and financing) can lead to improved performance of PHC processes and outputs (such as improved design, organization, access, utilization and quality of integrated health services). Those improved processes and outputs can, in turn, have an effect on improved outcomes (such as service coverage and financial protection) and an overall impact on health status. Aligned to the statement that PHC is an approach for strengthening health systems to accelerate progress towards UHC and the health-related SDGs, the outcomes and impact indicators have been fully aligned to the existing health-related SDG indicators.

The framework also highlights how a PHC-oriented health system demonstrates equity, quality and resilience, and how these areas can be assessed across the entire results chain.

## 3.2 Menu of indicators for country prioritization, adaptation and use

Based on the conceptual framework, a menu of indicators has been identified to assess, track and monitor progress and performance in PHC strengthening efforts across all three components. Indicators have been provided for each domain and subdomain and span the entire results chain. Figure 4 presents the menu of indicators across the PHC monitoring conceptual framework results chain. A summary table that maps each indicator to the PHC components is included in Annex 1 of this guidance and detailed metadata for each indicator are presented in the accompanying technical specifications (Web Annex).

The indicators were selected based on a systematic review of established indicator lists and related measurement methods for PHC and health systems performance within the context of UHC and the SDGs (Box 1), followed by extensive consultations with WHO technical experts, technical expert review groups comprising PHCPI partners, and feedback from PHC experts from ministries of health and academia.

The ensuing menu consists of a collection of indicators that have been chosen because they are deemed to meet the required criteria of relevance, validity, sensitivity, feasibility, availability, actionability around the PHC strategic and operational levers, and alignment with existing monitoring efforts for agreed global declarations and resolutions or standard international mechanisms.

The indicators have been categorized into three groups:

- **Tier 1 indicators:** those deemed feasible to collect, monitor and track in most contexts;
- **Tier 2 indicators:** those considered “desirable”, but not necessarily deemed feasible for all contexts to collect and use. In some cases, indicators are classified as Tier 2 as they are considered important, but further methodological development and testing is required;
- **Global indicators:** a small subset of Tier 1 indicators that are considered highly relevant for global monitoring and reporting to the World Health Assembly.

### Box 1. Conceptual and monitoring frameworks, indicator lists and methods included in the PHC monitoring and evaluation mapping exercise

- 2018 global reference list of 100 core health indicators (plus health-related SDGs) (11)
- Essential public health functions, health systems and health security: developing conceptual clarity and a WHO roadmap for action (12)
- Every Woman Every Child indicator and monitoring framework for the Global Strategy for Women’s, Children’s and Adolescents’ Health (2016–2030) (13)
- Health for All by the Year 2000 monitoring guidance (1981) (14)
- International Health Partnership for Universal Health Coverage (UHC2030) Health System Performance Assessment framework (15)
- International Health Regulations monitoring and evaluation frameworks and tools (16–18)
- High-quality health system framework (Kruk et al.) (19)
- OECD Health at a Glance 2019 (20)
- PAHO/WHO monitoring framework for universal health in the Americas (21)
- Primary Health Care Performance Initiative (PHCPI) conceptual framework and indicators (10, 22, 23)
- SDG indicators and metadata (24, 25)
- UHC global monitoring indicators (26–28)
- UNICEF minimum quality standards and indicators for community engagement (29)
- WHO and International Health Partnership (IHP+) common M&E framework (7)
- WHO European framework for action on integrated health services delivery (30)
- WHO European Primary Health Care, Impact, Performance and Capacity Tool (8)
- WHO framework on integrated people-centred health services (9, 31)
- WHO framework for strengthening health systems for UHC and the SDGs in Africa (32)
- WHO guidance for monitoring progress on UHC and the health-related SDGs in the South-East Asia Region (33)
- WHO health emergency and disaster risk management framework (34)
- WHO health systems building blocks (35)
- WHO monitoring, evaluation and review of national health policies, strategies and plans, from WHO’s *Strategizing national health in the 21st century: a handbook* (36)
- WHO Regional Office for the Eastern Mediterranean Primary Health Care Measurement and Improvement Initiative (37)
- WHO Western Pacific regional monitoring framework for the SDGs and UHC (38)

Countries are encouraged to select and adapt a parsimonious set of indicators from the menu (generally speaking no more than 30-40) according to country context, priorities, needs and health system maturity. Indicators should be selected in a balanced manner across the results chain and the domains of the conceptual framework, allowing for a broader list of indicators in domains of high priority for the context.

Of note, while many of the indicators draw from globally agreed standards and are already being reported regularly in many countries, others that are aspirational (mostly Tier 2 indicators) have been included to address novel areas of PHC measurement and will require further testing and development. The framework and indicators will be reviewed and refined regularly to take account of lessons learned in applying the framework as well as new approaches to measuring PHC that will emerge over time.

## Disaggregations

Numerous indicators can be disaggregated across various dimensions.

As **equity** in the delivery of health services is a cornerstone of PHC, many indicators can be disaggregated across various equity dimensions, including socioeconomic status, wealth, urban and rural residence, age, education level, sex and gender, ethnicity, displacement (such as those in a humanitarian crisis in refugee camps, internally displaced, living in informal settlements, or prisoners), disability, and stigma.

Although the focus of many indicators is at the primary care level (including both facility-based and community-based care), the PHC approach requires cohesion across the entire health system and various levels of care. It is therefore important to understand the performance of the other types of health facilities and their relationship to primary care. For example, in a PHC-oriented health system, hospitals play an important role in taking joint responsibility for the overall health of their surrounding communities – rather than focusing on delivering individualized and specialized care – and promoting people-centred integrated pathways across health systems (39). For this reason, it is important to disaggregate many indicators by **facility type**. Possible disaggregations related to level or setting of care should be tailored to country settings; they may include community health posts or centres, primary care facilities, general practitioner cabinets or practices, specialty outpatient facilities, first referral hospitals, specialty hospitals, long-term care facilities and continuing care facilities. Additionally, Figure 4 includes additional hospital-oriented indicators that are not necessarily PHC-specific, but considered important for broader PHC-oriented health system tracking and monitoring, particularly in terms of quality of care outputs.

Disaggregating facility-level data by **managing authority** allows comparison between key indicators in the public and private sectors, particularly important in many countries where a substantial quantity of health services is delivered in the private sector. Key indicators that can be disaggregated to track and assess private sector engagement in service delivery include mechanisms for private sector participation and engagement; domestic private health expenditure; completeness of reporting by private providers (including primary care); private sector facility density and distribution; private sector health workforce density and distribution; private sector availability and readiness of services; and service utilization in the private sector (number of visits per capita).

## Type and level of indicators

Each indicator in the menu has been mapped to its primary operational lever (recognizing that many will be relevant to more than one lever) and results chain domain. The indicators include a mix of quantitative indicators (such as financing, workforce, medicines, service availability, readiness, utilization and quality) and qualitative indicators (such as those pertaining to PHC policies and legal frameworks for PHC, multisectoral action, community engagement and design, and organization of health services).

Depending on the specific purpose and measurement method, indicators can be collected, aggregated and used across one or several levels, including national, district, facility, and community and individual levels.

## Baselines and targets

This guidance does not set global or national targets, as country context and population health needs vary to such an extent that it is difficult to set meaningful targets. However, countries are encouraged to set their own targets based on their own baseline and intended trajectory. Target setting should be based on criteria related to the baseline performance, feasibility and aspiration in countries.

## Outcome and impact indicators

It is important to note that the proposed indicators focus on the first sections of the results chain (structures, inputs, processes and outputs) as these most closely align to the levers of the *Operational framework for PHC*, and are therefore the actions and interventions that national and subnational decision-makers can implement to strengthen the PHC orientation of their health system. The important resulting outcome and impact indicators have already been well described and agreed through global processes, such as the 2030 Agenda for Sustainable Development (25) and the global reference list of 100 core health indicators (11). Outcome and impact indicators should be used in conjunction with the PHC menu of indicators, but are not the focus of this guidance. Still, for the purposes of comprehensiveness and to demonstrate the causal pathway between PHC, UHC and the SDGs, an extended results chain, which includes outcomes and impact indicators to be monitored in conjunction with the PHC menu of indicators, is included in Section 4.4 Bringing it all together: measurement to drive performance improvement.

Figure 3. PHC monitoring conceptual framework

□ Focus of the PHC monitoring conceptual framework  
 \* PHC strategic and operational levers

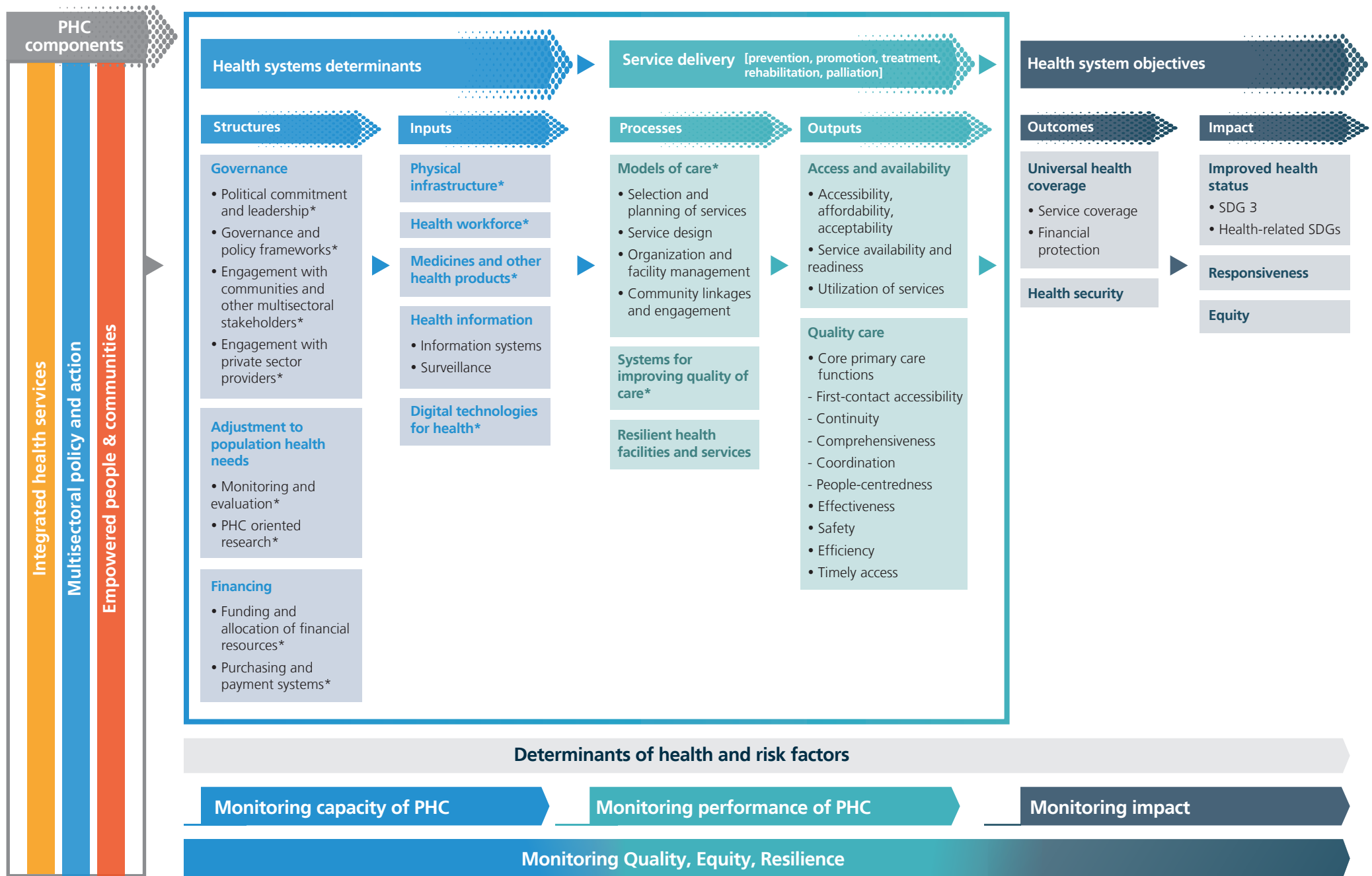
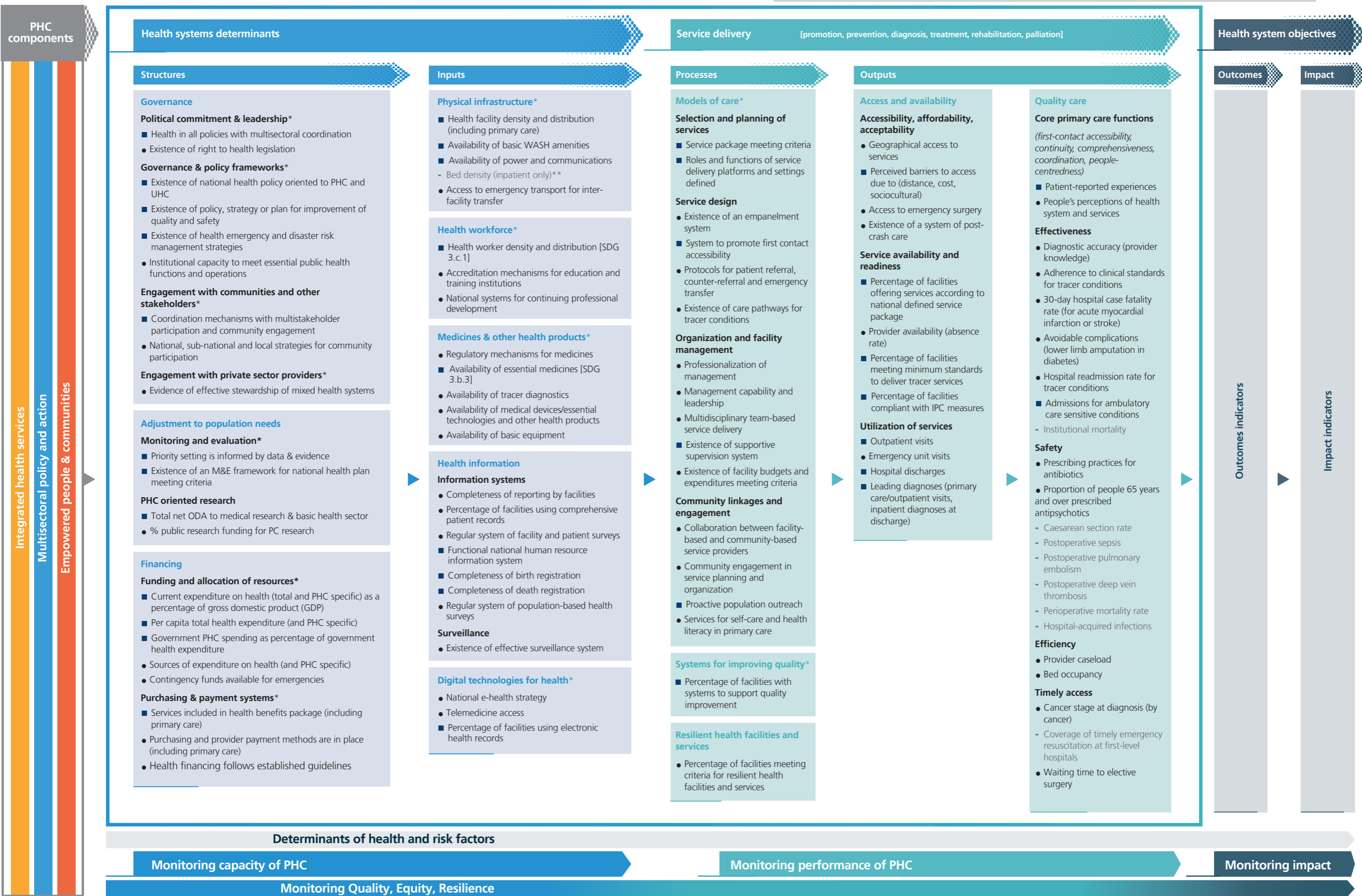


Figure 4. PHC recommended menu of indicators across results chain, based on conceptual framework

□ Focus of the PHC monitoring conceptual framework  
\* PHC strategic & operational levers

■ Tier 1 indicators (n=39)  
● Tier 2 indicators (n=48)  
- Grey text: additional hospital-oriented indicators





# 4. Using the PHC measurement framework



National and subnational decision-makers can select from the PHC menu of indicators depending on their priorities and in consideration of the country context and needs. The indicators presented below are organized against the PHC monitoring conceptual framework, starting from “health systems determinants”: structures and inputs, then moving to “service delivery”: processes and outputs. Under each section or domain, decision-makers can consider key questions on the state of PHC progress to rapidly assess and identify the current state of PHC, and select indicators that can provide data to help answer those questions and inform actions and reforms. Examples of actions at national and subnational levels that can be taken to advance the PHC orientation of health systems can be found for each lever in the *Operational framework for PHC* (6).

## 4.1 Monitoring PHC capacity

Monitoring progress in strengthening PHC capacity includes an assessment of a number of indicators under structures and inputs.

### 4.1.1 Structures

#### 4.1.1.1 Governance

Good governance is considered a core component of resilient health systems. While governments are the primary drivers of governance, non-State actors, including civil society, community groups and the private sector, are critical contributors to success. The governance domain includes an assessment of the level of **political commitment and leadership** to PHC as the main vehicle for achieving UHC through robust policies and legislation, as well as the extent to which a country’s **governance and policy frameworks** reflect and promote all three PHC components. These subdomains focus on the assessment of governance approaches (such as Health in All Policies), structures, policy frameworks, effective oversight and regulations.

Governance also includes subdomains focused on assessment of the extent of **engagement** with communities and other multisectoral stakeholders to jointly define problems and solutions and prioritize actions, as well as the extent and mix of private sector engagement in the provision of services.

**Table 2. Governance: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Political commitment and leadership</b>		
<i>Is there commitment to strengthening PHC to contribute to UHC and the broader SDGs?</i>	▪ Health in All Policies with multisectoral coordination	Qualitative assessment
	▪ Existence of right to health legislation	Qualitative assessment
<b>Governance and policy frameworks</b>		
<i>Are policies and strategies in place that are oriented to PHC as main vehicle for UHC?</i>	▪ Existence of national health policy oriented to PHC and UHC	Qualitative assessment
	▪ Existence of policy, strategy or plan for improvement of quality and safety	Qualitative assessment
<i>Are essential public health functions prioritized?</i>	▪ Existence of health emergency and disaster risk management strategies	Qualitative assessment
<i>Do policies promote multisectoral action to address the broader determinants of health?</i>	▪ Institutional capacity to meet essential public health functions and operations	Qualitative assessment
<b>Engagement with communities and other multisectoral stakeholders</b>		
<i>Are mechanisms in place that promote multisectoral engagement and action?</i>	▪ Coordination mechanisms with multistakeholder participation and community engagement	Qualitative assessment
<i>Are communities enabled to participate in decision-making?</i>	▪ Existence of national, subnational and local strategies for community participation	Qualitative assessment
<b>Engagement with private sector providers</b>		
<i>Is the private sector engaged to align with common health system goals?</i>	▪ Evidence of effective stewardship of mixed health systems	Qualitative assessment

#### 4.1.1.2 Adjustment to population health needs

Adjustment to population health needs includes regular collection and analysis of data and evidence about population health status and needs, appropriate use of this information to set and implement priorities, and continuous assessment and monitoring of changing population health needs and contexts. The situation analysis should be based on a comprehensive and participatory analysis of health determinants, trends and risks. It should also consider a country's epidemiological, political, socioeconomic and organizational context and pay attention to equity issues (including the impact on health of gender norms, roles and relations and intersecting factors such as poverty and social exclusion). The situation analysis should bring together both quantitative and qualitative data. Ideally, priority-setting exercises should be an integral part of a country's national health planning and review processes.

Investing in **PHC-oriented research**, including implementation research, is also critical to adjusting health systems to meet population health needs and should contribute to priority-setting exercises. Multistakeholder engagement plays an important role in priority setting because it ensures that priorities reflect population needs and that the interventions and programmes selected are acceptable and appropriate.

**Table 3. Adjustment to population health needs: considerations for action and corresponding indicators**

Questions to consider on country context and	Indicators to select from menu	Preferred data source
<b>Monitoring and evaluation</b>		
<i>Do data and evidence inform identification of health priorities, including to reach the most vulnerable?</i>	▪ Priority setting is informed by data and evidence	Qualitative assessment
	▪ Existence of an M&E framework for national health plan meeting criteria	Qualitative assessment
<b>PHC-oriented research</b>		
<i>Is research adequately funded to support the documentation and dissemination of successful strategies and lessons learned in strengthening PHC?</i>	▪ Total net official development assistance to medical research and basic health sector	Global database
	▪ Percentage of public research funding devoted to primary care research	Qualitative assessment

**4.1.1.3 Financing**

Health financing is critical to promote equitable access to high-quality integrated services while minimizing financial hardship. Financing for PHC should always be considered as part of a country’s holistic health financing strategy. This domain assesses funding and equitable **allocation of resources** to ensure that each person has access to health services without undue financial hardship. It includes examining the level of PHC spending based on national health accounts – including funding sources – as well as funding allocation across different levels of care (from primary care to hospitals) and public health interventions.

**Strategic purchasing and provider payment** systems should strengthen the PHC orientation of health systems by promoting primary care as the first contact, increasing the accessibility of priority interventions to the entire population, and supporting the integration of individual services and public health. Assessment of this domain includes evaluating whether a set of services (including primary care services) has been defined in the health benefits package. It also includes mapping of purchasing and payment methods that support PHC-oriented models of care and promote the integration of health services for quality of care. The WHO-CHOICE tools and WHO financing progress matrix can support costing and financing of health service interventions, including for primary care (40, 41).

**Table 4. Financing: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Funding and allocation of resources</b>		
<i>How are public funds distributed across service delivery platforms?</i>	<ul style="list-style-type: none"> <li>Current expenditure on health (total and PHC specific) as a percentage of gross domestic product (GDP)</li> </ul>	National health accounts
<i>Has government spending on PHC increased?</i>	<ul style="list-style-type: none"> <li>Per capita total health expenditure (and PHC specific)</li> <li>Government PHC spending as percentage of government health expenditure</li> </ul>	National health accounts
<i>What are the main sources of funding for PHC?</i>	<ul style="list-style-type: none"> <li>Sources of expenditure on health (and PHC specific)</li> <li>Contingency funds available for emergencies</li> </ul>	National health accounts Qualitative assessment
<b>Purchasing and payment systems</b>		
<i>Are provider payment systems that promote PHC-oriented models of care in place?</i>	<ul style="list-style-type: none"> <li>Services included in health benefits package (including primary care)</li> <li>Purchasing and provider payment methods are in place (including primary care)</li> </ul>	Qualitative assessment
<i>Is health financing inclusive to reach the most vulnerable?</i>	<ul style="list-style-type: none"> <li>Health financing follows established guidelines</li> </ul>	Qualitative assessment

## 4.1.2 Inputs

### 4.1.2.1 Physical infrastructure

The **physical infrastructure** domain assesses the density and distribution of health facilities. For this, ideally a master facility list (42) exists in the country that comprises all facilities listed by:

- type: primary care facilities and community health posts, first referral hospitals, specialty hospitals, and long-term care facilities such as nursing homes or continuing care facilities where applicable;
- managing authority: government, private for-profit, and private not-for-profit;
- residence area or geographical location: urban, peri-urban, and rural, and including geographical coordinates.

This domain also assesses the capacities of health facilities to provide effective and quality services with reliable water, sanitation, waste disposal or recycling, telecommunication connectivity, power supply, and transport systems that can connect patients to other care providers.

Assessment in this domain should be tailored to country-specific contexts.

### 4.1.2.2 Health workforce

The **health workforce** domain assesses the quantity, skills mix, and distribution of multidisciplinary skilled health workers at community, outreach, primary care facility, referral facility and hospital levels. It also assesses whether and how the health workforce is supported by effective management, supervision and appropriate compensation.

Health worker density is disaggregated by occupation based on the 2012 International Standard Classification of Occupations (ISCO) (43). Of particular relevance to PHC are family medicine practitioners, who are generalist medical practitioners in some countries and specialists in others. They provide person-centred, continuous and comprehensive care to individuals and families in their communities. The international classification also assesses the availability of community health workers, who are essential to delivering services to children, adolescents, adults and vulnerable populations at the community level (44).

**Table 5. Physical infrastructure: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Physical infrastructure</b>		
<i>Are primary care facilities physically accessible to all populations?</i>	<ul style="list-style-type: none"> <li>Health facility density/distribution (including primary care)</li> </ul>	Facility census
<i>Are health facilities secure, accessible, and meeting standards for WASH?</i>	<ul style="list-style-type: none"> <li>Availability of basic water, sanitation and hygiene (WASH) amenities</li> </ul>	Facility survey
<i>Do facilities have access to transportation for referral to other levels of care?</i>	<ul style="list-style-type: none"> <li>Availability of power</li> </ul>	Facility survey
	<ul style="list-style-type: none"> <li>Availability of communications</li> </ul>	Facility survey
	<ul style="list-style-type: none"> <li>Access to emergency transport for interfacility transfer</li> </ul>	Facility survey

\*\* Hospital-oriented indicators considered important for broader PHC-oriented health system monitoring and relevant in terms of inter-relations with primary care.

**Table 6. Health workforce: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Health workforce</b>		
<i>Is there an adequate and trained workforce?</i>	<ul style="list-style-type: none"> <li>Health worker density and distribution [SDG 3.c.1]</li> </ul>	National Health Workforce Accounts
<i>Are mechanisms in place to support retention of workforce?</i>	<ul style="list-style-type: none"> <li>Accreditation mechanisms for education and training institutions</li> </ul>	National Health Workforce Accounts
	<ul style="list-style-type: none"> <li>National systems for continuing professional development</li> </ul>	National Health Workforce Accounts

### 4.1.2.3 Medicines and other health products

The **medicines and other health products** domain measures the availability and affordability of appropriate, safe, effective and high-quality medicines and health products. Monitoring the core set of relevant essential medicines is based on the WHO Model List of Essential Medicines and is one of the SDG health indicators (SDG indicator 3.b.3) (25, 45). The proposed index is computed based on a subset of 32 tracer essential medicines for acute and chronic, communicable, and noncommunicable diseases in the primary care setting. By definition, essential medicines are those that satisfy the priority health care needs of the population and are selected for inclusion on the list of essential medicines based on due consideration of disease prevalence, evidence of efficacy and safety, and consideration of cost and cost-effectiveness.

In addition to medicines, the domain includes measures to assess availability of other medical devices and health products. This includes measures to assess the availability of tracer diagnostics (general and disease-specific) for primary care community and health care settings without laboratories – including health posts, doctors’ offices, outreach clinics, ambulatory care, and home-based and self-testing. It also includes measures to assess availability of essential supplies and equipment.

This domain also proposes measuring and monitoring key drug regulatory mechanisms to ensure the safety, quality and efficacy of drugs and the accuracy of product information.

**Table 7. Medicines and other health products: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Medicine and other health products</b>		
<i>Are regulatory mechanisms in place to support safety, effectiveness and high quality of health products?</i>	<ul style="list-style-type: none"> <li>▪ Regulatory mechanisms for medicines</li> <li>▪ Availability of essential medicines [SDG 3.b.3]</li> </ul>	<ul style="list-style-type: none"> <li>Qualitative assessment</li> <li>Facility survey</li> </ul>
<i>Has availability of medicines, diagnostics, supplies and equipment improved?</i>	<ul style="list-style-type: none"> <li>▪ Availability of essential in vitro diagnostics</li> <li>▪ Availability of priority medical equipment and other medical devices</li> </ul>	<ul style="list-style-type: none"> <li>Facility survey</li> <li>Facility survey</li> </ul>

### 4.1.2.4 Health information

This domain focuses on country **health information systems and surveillance systems** that are critical for generating data required for PHC monitoring.

The main data sources (accounting for over 80% of the menu of PHC indicators) for PHC capacity and performance indicators include:

- qualitative key informant assessments
- facility surveys
- routine health information systems
- individual patient records and electronic medical record systems
- patient and health care provider surveys
- community assessments.

Population-based surveys and civil registration and vital statistics systems are also of importance, particularly for monitoring outcome and impact indicators related to UHC coverage and health status. The accompanying technical specifications (Web Annex) provides a summary of preferred data sources and details on measurement methods for each indicator.

#### 4.1.2.5 Digital technologies for health

The digital technologies for health domain supports assessment of the use of information innovations, communication technologies, telemedicine, and big data that can improve how health services are provided as well as how individuals and communities manage their own health and access information about health conditions. Examples include use of electronic reminders, personal health tracking, client identification, electronic health records, and supply chain tracking to support service organization and delivery.

**Table 8. Health information: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Information systems</b>		
<i>How fit for purpose are existing data sources to provide necessary information for monitoring and management of PHC?</i>	▪ Completeness of reporting by facilities	RHIS
	▪ Percentage of facilities using comprehensive patient records	Facility survey
	▪ Regular system of facility and patient surveys	Qualitative assessment
	▪ Functional national human resources information system and national health workforce accounts	NHRIS NHWA
	▪ Completeness of birth registration	CRVS Population-based survey
	▪ Completeness of death registration	CRVS
	▪ Regular system of population-based health surveys	Qualitative assessment
<b>Surveillance</b>		
<i>Is an effective surveillance system in place?</i>	▪ Existence of effective surveillance system	SPAR

**Table 9. Digital technologies for health: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Digital technologies for health</b>		
<i>Has use of digital technologies to support service delivery increased in facilities?</i>	<ul style="list-style-type: none"> <li>▪ National e-health strategy</li> </ul>	Qualitative assessment
	<ul style="list-style-type: none"> <li>▪ Telemedicine access</li> </ul>	Population-based
	<ul style="list-style-type: none"> <li>▪ Percentage of facilities using electronic health records</li> </ul>	Facility survey

## 4.2 Monitoring PHC performance

The menu of indicators moves from structures and inputs to monitor PHC capacities to looking at processes and outputs to monitor PHC performance. Process and output indicators help to assess service delivery from promotion and prevention to diagnosis, treatment, rehabilitation and palliation.

### 4.2.1 Processes

#### 4.2.1.1 Models of care

Strong PHC-oriented models of care are critical to improving PHC performance. A model of care is a conceptualization of how health services should be selected, designed, organized, delivered, managed and supported by different service delivery platforms (6). A critical process to orient models of care around PHC is to define a comprehensive package of services suited to national context and needs. The package should be based on the country's health objectives and priorities and in alignment with foundational elements and inputs (such as governance, financing, workforce, physical infrastructure, medicines and other health products, health information and other health technologies) (46). Additional details can be found in the WHO UHC compendium, which provides a global repository of health services and interventions that can be used by countries to guide building comprehensive service packages and the organization of service delivery through PHC orientation (47).

The models of care domain includes indicators for assessing and monitoring how countries are defining their service packages. The indicators also assess how those services are designed, organized and managed across different platforms and by multidisciplinary teams of providers along care pathways, considering both individual- and population-based services. PHC-based models of care orient people towards primary care to ensure that it is both the first and regular point of contact while promoting strong linkages across all levels of care through functioning referral and counter-referral systems (6). As such, the domain indicators take account of the way that people access services – from the first point of care (often for undifferentiated symptoms or conditions) to subsequent visits for conditions that require care over time (for example, child vaccination visits, antenatal and postnatal care) or continuous patient follow-up and support (for example, for ongoing management of HIV, TB, noncommunicable diseases and mental health needs).



**Table 10. Models of care: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Selection and planning of services</b>		
<i>Have service packages been defined that cover essential health services and essential public health functions across the full spectrum of care?</i>	▪ Service package meeting criteria	Qualitative assessment
	▪ Roles and functions of service delivery platforms and settings defined	Qualitative assessment
<b>Service design</b>		
<i>Are services delivered in an integrated way across main delivery platforms?</i>	▪ Existence of an empanelment system	Qualitative assessment
<i>Are care pathways established to support continuity of care?</i>	▪ System to promote first contact accessibility	Qualitative assessment
	▪ Protocols for patient referral, counter-referral and emergency transfer	Qualitative assessment
<i>Are primary care providers actively responsible for a defined population?</i>	▪ Existence of care pathways for tracer conditions	Qualitative assessment
<b>Organization and facility management</b>		
<i>Do primary care facility managers have adequate management and leadership capacities?</i>	▪ Professionalization of management	Qualitative assessment
	▪ Management capability and leadership	Facility survey
<i>Are multidisciplinary teams established to support integrated and continuous care?</i>	▪ Multidisciplinary team-based service delivery	Facility survey
	▪ Existence of supportive supervision system	Facility survey
	▪ Existence of facility budgets and expenditures meeting criteria	Qualitative assessment
<b>Community linkages and engagement</b>		
<i>Are community linkages in place?</i>	▪ Collaboration between facility-based and community-based service providers	Facility survey
	▪ Community engagement in service planning and organization	Qualitative assessment
<i>Does health-related population outreach take place?</i>	▪ Proactive population outreach	Qualitative assessment
	▪ Services for self-care and health literacy in primary care	Facility survey

#### 4.2.1.2 Systems for improving quality of care

Quality care that is effective, safe, people centred, timely, efficient, equitable and integrated (48) emerges from multiple, interdependent variables within a complex health care system. Quality care requires careful planning and systematic efforts to engage and understand the needs of key stakeholders, including patients, families and communities. Quality control, through internal monitoring and continuous measurement, alongside quality assurance ensures that processes are fulfilling required standards. Quality planning, control and assurance sit alongside efforts to enhance performance through quality improvement methods and interventions.

This domain assesses systems and improvement interventions at the local, subnational and national levels that enable continuous assessment and improvement of the quality of integrated health services. Given the multifaceted nature of quality of care across multiple programmes and the broader health system environment, this domain assesses the processes and tools used by health care providers. These are designed to reduce harm, including through the availability of clinical guidelines, protocols and checklists, systems for adverse event reporting including medication harm, processes for clinical audits and mortality reviews.

**Table 11. Systems for improving quality of care: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Systems for improving quality of care</b>		
<i>Do facilities have quality improvement processes in place?</i>	<ul style="list-style-type: none"> <li>Percentage of facilities with systems to support quality improvement</li> </ul>	Facility survey

#### 4.2.1.3 Resilient health facilities and services

Strong and sustainable linkages between health security and health system capacities, with a focused effort on preparedness, response and recovery, is critical to building resilient PHC-oriented health systems and services. Measuring and monitoring health system emergency preparedness and resilience capacities requires a broader analysis of indicators across many domains of the results chain (see section 4.3.3 below on monitoring resilience). However, at the service level, it is important to include an assessment of a key set of criteria and attributes to measure preparedness and resilience of services at the point of care.

Assessing service preparedness and resilience is based on the presence of several items and measures to identify areas of vulnerability and opportunities for improvement in service delivery before, during and after public health emergencies. The indicator for this domain focuses on emergency and disaster risk management, continuity of services and functions, and use of reviews and lessons learned to facilitate recovery and strengthen capacities for current and future risks.

**Table 12. Resilient health facilities and services: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Resilient health facilities and services</b>		
<i>Do facilities meet key resilience criteria?</i>	<ul style="list-style-type: none"> <li>Percentage of facilities meeting criteria for resilient health facilities and services</li> </ul>	Facility survey

## 4.2.2 Outputs

The next dimension in the framework measures the achievement of PHC outputs to track PHC performance. These include access, availability and quality of care, with a particular focus on measuring the functions of primary care.

### 4.2.2.1 Access and availability

The indicators in this domain assess the **accessibility, affordability and acceptability of care** (including perceived geographical, financial and sociocultural barriers). The indicators also measure dimensions of **service availability and readiness** as well as actual **service utilization**.

The assessment of the availability of health services should be aligned with a country's defined package of essential health services and public health functions. Service availability measures assess the extent to which specific services are offered and available in the relevant health care settings (for example, primary care, hospital and long-term care). A composite indicator on service availability should consider core services across the continuum of care. Additional information can be found in the WHO UHC compendium (47).<sup>1</sup>

Service readiness examines the extent to which the services offered have the minimum capacities in place for high-quality and safe provision of care. The readiness assessment is based on the presence of items and measures, including availability of trained health care providers; availability of essential medicines, diagnostics and basic equipment; presence of necessary infection prevention control items; and protocols for tracer services.

Countries should refer to additional global tools that support assessment and monitor service availability and readiness (49-51). Note that these should be tailored to the selection, design and delivery of health services in a given context.

**Table 13. Access and availability: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Accessibility, affordability, acceptability</b>		
<i>Has access to services improved?</i>	<ul style="list-style-type: none"> <li>Geographical access to services</li> </ul>	Facility database GIS
<i>Has equity in access improved?</i>	<ul style="list-style-type: none"> <li>Perceived barriers to access (geographical, financial, sociocultural)</li> </ul>	Population-based survey Facility survey (exist interviews)
	<ul style="list-style-type: none"> <li>Access to emergency surgery</li> </ul>	RHIS GIS
	<ul style="list-style-type: none"> <li>Existence of a system of post-crash care</li> </ul>	Qualitative assessment

<sup>1</sup> Core services across the continuum of care may consider management of common presentations (emergency and common signs and symptoms); reproductive and sexual health (pregnancy and birth, sexual health, and family planning); growth development and ageing (nutrition, physical activity and sleep, infant child and adolescent growth and development); considerations in older people and end of life: noncommunicable diseases and mental health (blood disorders, cancers, cardiovascular diseases, substance use disorders and mental disorders); communicable diseases; and violence and Injury.

Service availability and readiness		
Are comprehensive services available at point of care?	▪ Percentage of facilities offering services according to national defined service package	Facility survey RHIS
	▪ Provider availability (absence rate)	Facility survey
Are services meeting minimum standards?	▪ Percentage of facilities meeting minimum standards to deliver tracer services	Facility survey
	▪ Percentage of facilities compliant with infection prevention and control (IPC) measures	Facility survey
Utilization of services		
What is the utilization of services across service delivery platforms?	▪ Outpatient visits	RHIS Population-based surveys
	▪ Emergency unit visits	RHIS
	▪ Hospital discharges**	RHIS
	▪ Leading diagnoses (primary care/outpatient visits, inpatient diagnoses at discharge**)	RHIS

\*\* Hospital-oriented indicators considered important for broader PHC-oriented health system monitoring and relevant in terms of inter-relations with primary care.

#### 4.2.2.2 Quality care

A number of quality of care indicators focus on the **core primary care functions** that are proven to positively impact the quality of service delivery and the experience of patients. These include first contact accessibility, continuity, comprehensiveness, coordination and people-centredness of services (2, 19, 52, 53).

The indicators in this domain assess primary care as the first point of contact with the health system, as well as the extent to which patients see a regular health care provider who is familiar with their medical history and offers a comprehensive range of services covering a broad range of conditions to meet their needs (9, 19). They also help to assess the overall coordination and comprehensiveness of care across various care settings and platforms and the people-centredness of services to understand if services are responding to the full set of needs of individuals over time. Assessing provider–patient interactions at the point of care and patient and community satisfaction with services is essential for this, as positive user experience can improve retention in care, adherence to treatment and confidence in health systems, while also being a worthy goal in its own right (19).

In addition to the core primary care functions, other key dimensions of quality must be assessed for a comprehensive assessment of the quality of care. These include:

- **effectiveness of care** to ensure care is evidenced-based and adheres to established standards;
- **safety of care** to avoid harm to people for whom the care is intended;
- **efficiency of care** to minimize waste and maximize capacity to deliver care to those who need it;
- **timeliness of care** to ensure that people can access care when they need it (19, 48, 53).

**Table 14. Quality care: considerations for action and corresponding indicators**

Questions to consider on country context and needs	Indicators to select from menu	Preferred data source
<b>Core primary care functions (first-contact accessibility, continuity, comprehensiveness, coordination, people-centredness)</b>		
<i>Are primary care services the first point of contact?</i>	<ul style="list-style-type: none"> <li>▪ Patient-reported experiences</li> </ul>	Patient survey Facility survey (exit interviews)
<i>Do patients have a regular health provider?</i>		
<i>Are visits managed effectively at the primary care level?</i>	<ul style="list-style-type: none"> <li>▪ People’s perception of health system and services</li> </ul>	Population-based survey
<i>Are services responsive to patient and community needs?</i>		
<b>Effectiveness</b>		
<i>Is provision of care adherent to clinical standards?</i>	<ul style="list-style-type: none"> <li>▪ Diagnostic accuracy (provider knowledge)</li> </ul>	Facility survey (patient-provider observations or record review)
	<ul style="list-style-type: none"> <li>▪ Adherence to clinical standards for tracer conditions</li> </ul>	Facility survey (patient-provider observations or record review)
	<ul style="list-style-type: none"> <li>▪ 30-day hospital case fatality rate (for acute myocardial infarction or stroke)**</li> </ul>	RHIS Facility survey (record review)
	<ul style="list-style-type: none"> <li>▪ Avoidable complications (lower limb amputation in diabetes)</li> </ul>	RHIS Facility survey (record review)
	<ul style="list-style-type: none"> <li>▪ Hospital readmission rate for tracer conditions**</li> </ul>	RHIS Facility survey (record review)
	<ul style="list-style-type: none"> <li>▪ Admissions for ambulatory care sensitive conditions</li> </ul>	RHIS
<b>Safety</b>		
<i>Has patient safety improved?</i>	<ul style="list-style-type: none"> <li>▪ Prescribing practices for antibiotics</li> </ul>	Prescription database
	<ul style="list-style-type: none"> <li>▪ Proportion of people 65 years and over prescribed antipsychotics</li> </ul>	Prescription database
<b>Efficiency</b>		
<i>What is the volume of visits at hospitals?</i>	<ul style="list-style-type: none"> <li>▪ Provider caseload</li> </ul>	Facility survey
	<ul style="list-style-type: none"> <li>▪ Bed occupancy**</li> </ul>	RHIS
<b>Timely access</b>		
<i>Are services delivered in a timely manner?</i>	<ul style="list-style-type: none"> <li>▪ Cancer stage at diagnosis (by cancer)</li> </ul>	Cancer registry
	<ul style="list-style-type: none"> <li>▪ Waiting time to elective surgery **</li> </ul>	RHIS (Waiting time management systems)

\*\* Hospital-oriented indicators considered important for broader PHC-oriented health system monitoring and relevant in terms of inter-relations with primary care.

### 4.2.2.3 Indicators for hospital settings

As primary care is foundational to the broader PHC approach, the framework includes many indicators that focus on primary care as a key process in the health system to support first contact, accessible, continued, comprehensive and coordinated patient-focused care (2, 6). Nonetheless, to enable a more complete assessment of health services, their PHC orientation, and their degree of integration, it is also important to assess other service delivery settings (for example, emergency care units and hospitals). As noted above, in a PHC-oriented model of care hospitals in particular must adapt their role as specialized providers of individual acute care to provide joint care to members of their respective populations in cohesion and coordination with primary care as well as other levels of care (39). For this reason, a number of the indicators in the framework are hospital specific or oriented, and have been marked with \*\* in the tables above.

Additionally, and as highlighted in Figure 4, supplemental hospital indicators that are not PHC-specific, but important for assessing overall quality of care include:

- Bed density (inpatient only)
- Institutional mortality
- Caesarean section rate
- Postoperative sepsis
- Postoperative pulmonary embolism
- Postoperative deep vein thrombosis
- Perioperative mortality rate
- Hospital-acquired infections
- Coverage of timely emergency resuscitation at first-level hospitals

These indicators – while not explicitly focused on PHC – are considered important for broader health system monitoring and of specific relevance in terms of inter-relation with primary care.

## 4.3 Cross-cutting dimensions of quality, equity and resilience

The PHC measurement framework and menu of indicators provide countries with the guidance to assess, track and monitor progress across essential **dimensions of quality, equity and resilience** along the entire results chain.

### 4.3.1 Quality

This guidance recognizes quality as a cross-cutting concept that is included throughout health system determinants and service delivery, resulting in effective outcomes and impact. Tracking improvements and investments in PHC structures and inputs is foundational to assess the prerequisite enabling health system determinants that must be in place to ensure the delivery of high-quality services at the point of care. These indicators pay careful attention to factors related to governance and defined accountability mechanisms; essential infrastructure requirements such as water, sanitation and hygiene and reliable electricity; a trained, supported and motivated workforce; availability of quality medicines, medical devices and other health products; and health information systems that ensure improvement strategies are informed by data.

At the service delivery level, indicators on models of care and systems for improving quality of care provide key data on processes that should be in place to promote continuous improvement in quality of care. Several output indicators are also essential to assessing the dimensions of high-quality care. The first table in section 2 of the accompanying technical specifications (Web Annex) denotes quality-specific indicators. While identifying variation in care across settings and driving specific improvement activities

is best achieved through consideration of a broad set of quality-related indicators, some countries may also consider summarizing data into a dashboard or scorecard to enable monitoring of progress and performance over time. Additional detail on summarizing and visualizing data is included in sections below.

### 4.3.2 Equity

One of the main rationales for implementing a PHC approach is to ensure that health services are equity oriented, gender responsive and human rights based. This is essential to achieving UHC and the health-related SDGs, leaving no one behind, and ultimately contributing towards realization of the right to health, without distinction of any kind. Equity is defined as the absence of avoidable, unfair or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, geographically or by other means of stratification (54). Health inequities therefore involve more than inequality with respect to health determinants, but also access to the resources needed to improve and maintain health or health outcomes. They also entail a failure to avoid or overcome inequalities that infringe on fairness and human rights norms.

Effective monitoring of equity therefore needs to consider critical inequality dimensions to examine how the health system is meeting the needs of various population groups. These dimensions include (54-57):

- economic status (household wealth or individual's income);
- place of residence (urban and rural area);
- geography (subnational region);
- age;
- sex;
- gender;
- education;
- occupation;
- ethnicity;
- religion;
- caste;
- displacement (such as those in a humanitarian crisis in refugee camps, internally displaced, or living in informal settlements, or prisoners);
- disability;
- sexual orientation;
- migrant status;
- stigma.

Wherever possible, health indicators across the results chain need to be disaggregated and analysed based on these inequality dimensions. The second table in section 2 of the accompanying technical specifications (Web Annex) highlights the subset of indicators from the PHC menu of indicators with focused inequality dimensions and disaggregations. It also includes indicators with a particular emphasis on or attribute related to equity, gender and human rights. Equity disaggregations (for example, by managing authority, residential area, wealth quintile, gender, age or education) are also noted for all indicators in the first table in section 1 of the accompanying technical specifications (Web Annex).

As health equity is an ultimate goal of the health system, it is important to measure attainment of equity through a comprehensive assessment of equity in service coverage and health status. WHO and experts have provided principles and guidance for monitoring health inequities (56, 58-60). In addition, tools and approaches exist for conducting gender analysis (61) and assessing barriers to health services (62, 63).

### 4.3.3 Resilience

Public health emergencies continue to threaten health security globally. Lessons from previous and ongoing infectious disease outbreaks (for example, the current COVID-19 pandemic; 2014–2015 West Africa Ebola virus disease outbreak; 2003 Asia and North America severe acute respiratory syndrome (SARS) outbreak; and 2018–2020 Democratic Republic of the Congo Ebola virus disease outbreak) have highlighted the need for effective health system preparedness and resilient high-quality health services to tackle all hazard risks. The COVID-19 outbreak has especially shown how poor quality of care, coupled with suboptimal infection prevention and control (IPC) measures, has contributed to widespread transmission in health facilities. This highlights the need to continuously assess resilience of health systems across the entire results chain, not only focusing on regulatory frameworks in the inputs and structures. In this context, resilience is defined as the capacity of health actors, institutions and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganize if conditions require it (64).

As such, resilience can be assessed across many dimensions of the results chain (see indicators noted in third table of section 2 of the accompanying technical specifications (Web Annex) as having a focused resilience dimension), including governance, financing, physical infrastructure, health workforce, medicines and other health products, health information, models of care, resilient health facilities and services, access, and availability and quality of care. In addition, indicators from existing emergency preparedness and response frameworks have been included as individual indicators and components of relevant indices (16, 65, 66).

It is of note that, as with equity, resilience is an ultimate goal of the health system, and it is important to measure resilience through a comprehensive assessment spanning outcomes (such as improved service coverage) and impact.

## 4.4 Bringing it all together: PHC monitoring to drive performance improvement

As improvement in PHC performance towards UHC and the SDGs is the ultimate goal of this guidance, the PHC measurement framework and menu of indicators have been designed to support comprehensive analysis of PHC capacities and performance to reach overall health system objectives and signal health system bottlenecks and needs for investment. The guidance enables countries to conduct stepwise or “cascade” analyses that link structures and inputs to results to facilitate and inform decision-making, resource allocation, actions and interventions around the PHC strategic and operational levers as part of national processes and mechanisms for health sector planning and review.

Figure 5 demonstrates how national and subnational decision-makers can use the framework to consider context-specific questions to get started and measure indicators that help to answer those questions to ultimately use the results to inform PHC-oriented actions and reforms. Figure 6 presents the PHC measurement framework and indicators including outcomes and impact indicators, demonstrating how measuring PHC capacities and performance improvement contributes to monitoring UHC, health-related SDGs, and overall impact on health and well-being. Because health systems are complex and adaptive, decision-makers will need to monitor indicators over time to evaluate whether changes in levers (throughout structures, inputs and processes) have contributed to the intended results (under outputs, outcomes and impact) and course-correct accordingly. As many indicators can be collected on an annual or more regular basis, regular and ongoing assessment of PHC progress and performance results can help to identify gaps and areas for improvement to create nudges for quick actions and strategies for PHC improvement as well as more long-term and sustainable PHC reform and strategy development for improved impact. Examples of potential actions for PHC improvement are described in the *Operational framework for PHC* (6).



To support implementation and use of the framework and indicators, countries may consider aggregating indicators into PHC capacity and PHC performance indices. Scorecards and dashboards can be helpful instruments for the presentation of these data and changes over time to inform and drive PHC improvement. These can include an actionable overview of a limited set of key indicators with targets and “traffic lights” to bring attention to which areas are performing well or experiencing challenges. These have significant potential to support regular reviews of PHC performance and improve data quality. Examples of such scorecards include the PHCPI vital signs profiles, WHO regional country profiles, and high-quality health system country dashboards (19, 22, 33, 37). A sample visualization of the PHCPI vital signs profile, which can be used to track and guide performance improvement, is included in Figure 7.

Use of the framework can also be applied to particular conditions or programmatic areas through a PHC lens. This can be of particular value for assessing performance on management of high-burden conditions. In some places, this application may be limited as several areas (such as rehabilitation, palliation and mental health) have less developed global indicator sets. Nonetheless, the framework enables analyses across the continuum of care (promotion, prevention, diagnosis, treatment, rehabilitation and palliative care). An example of how the framework can be applied to assess noncommunicable disease (NCD) services is included in Annex 2 of this guidance.

Figure 5. Monitoring PHC progress and performance for improvement

□ Focus of the PHC monitoring conceptual framework

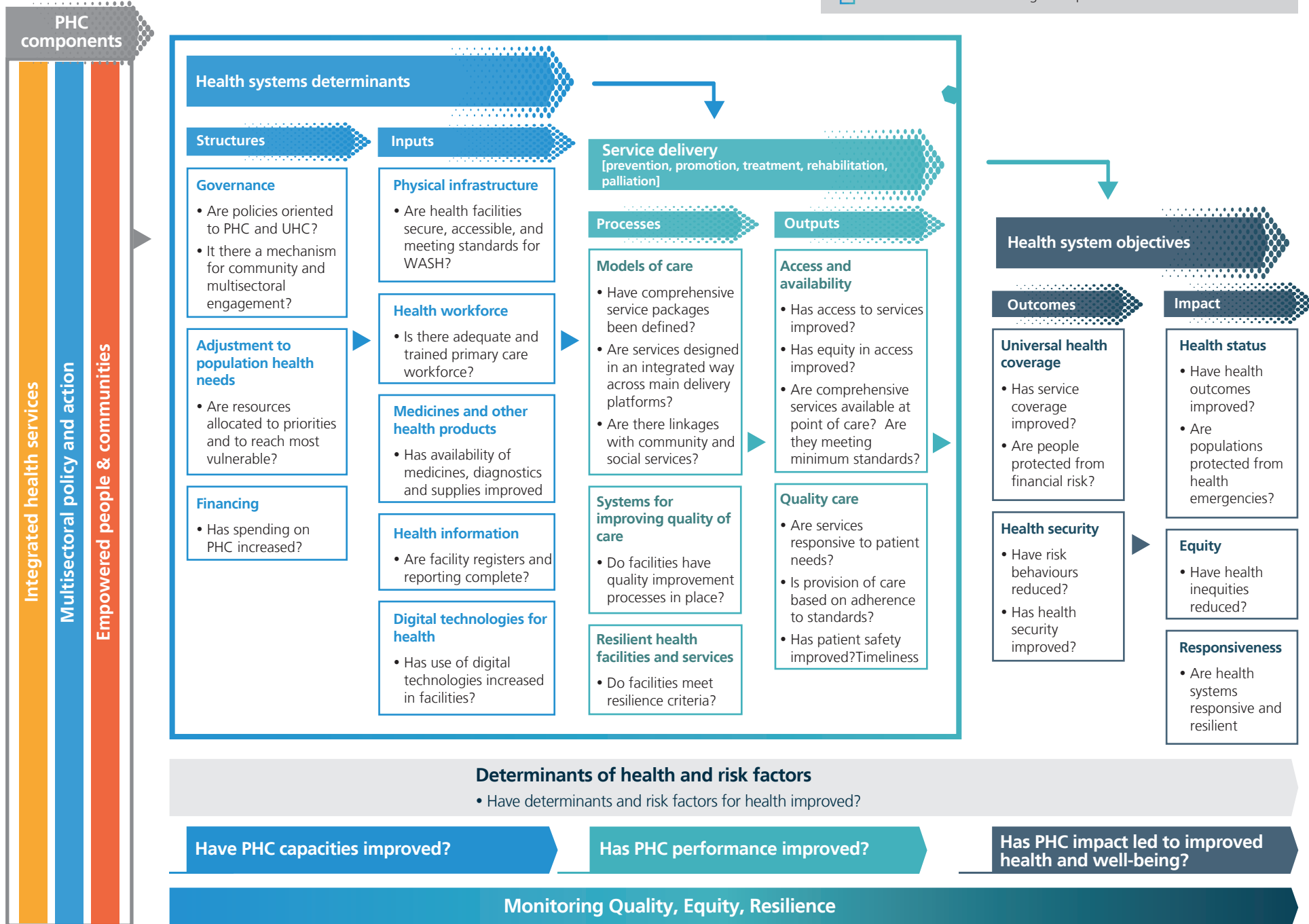


Figure 6 PHC measurement framework and menu of indicators (including outcomes and impact indicators)

□ Focus of the PHC monitoring conceptual framework  
 \* PHC strategic & operational levers

■ Tier 1 indicators (n=39)  
 ● Tier 2 indicators (n=48)  
 - Grey text: additional hospital-oriented indicators

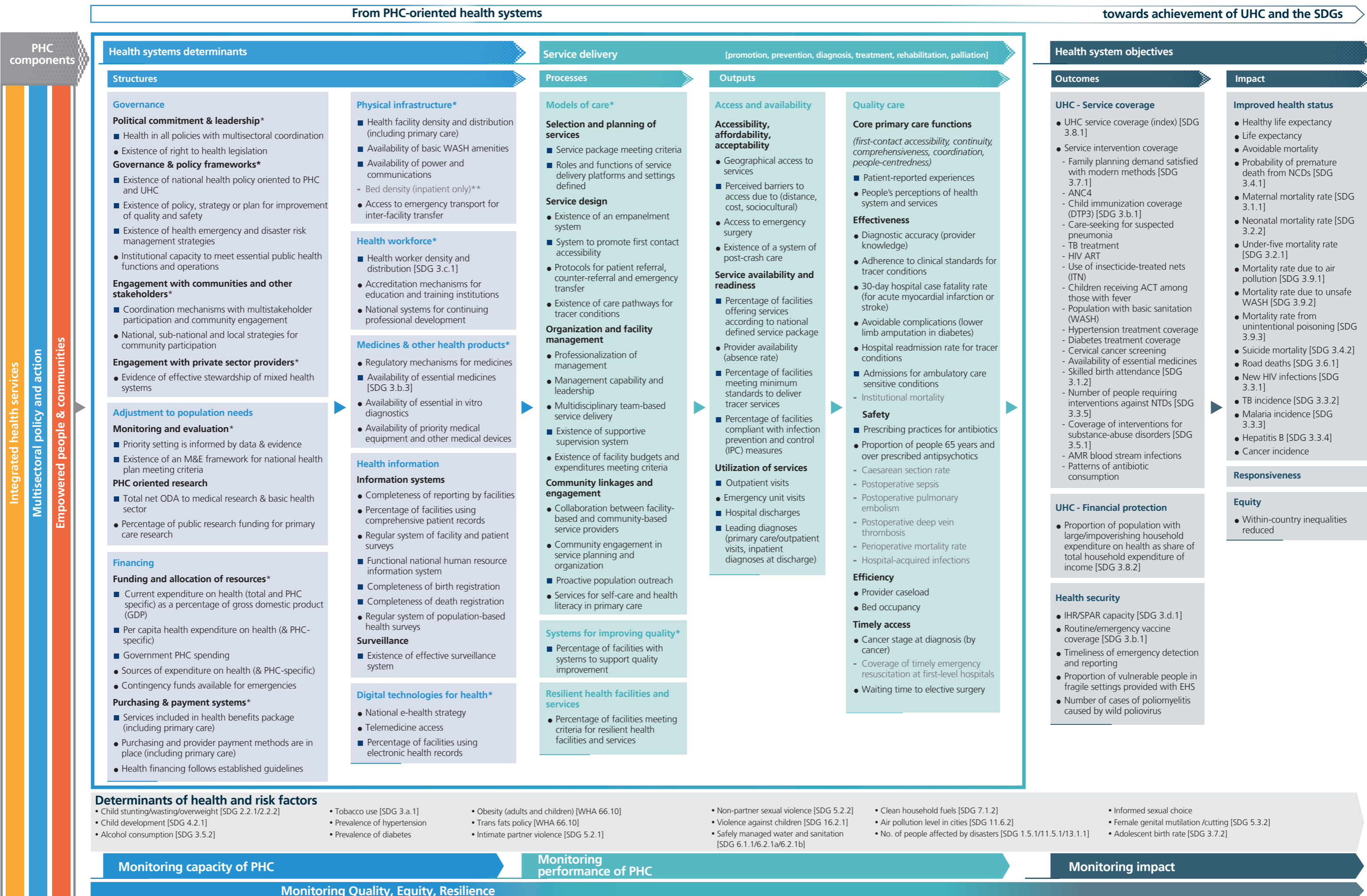
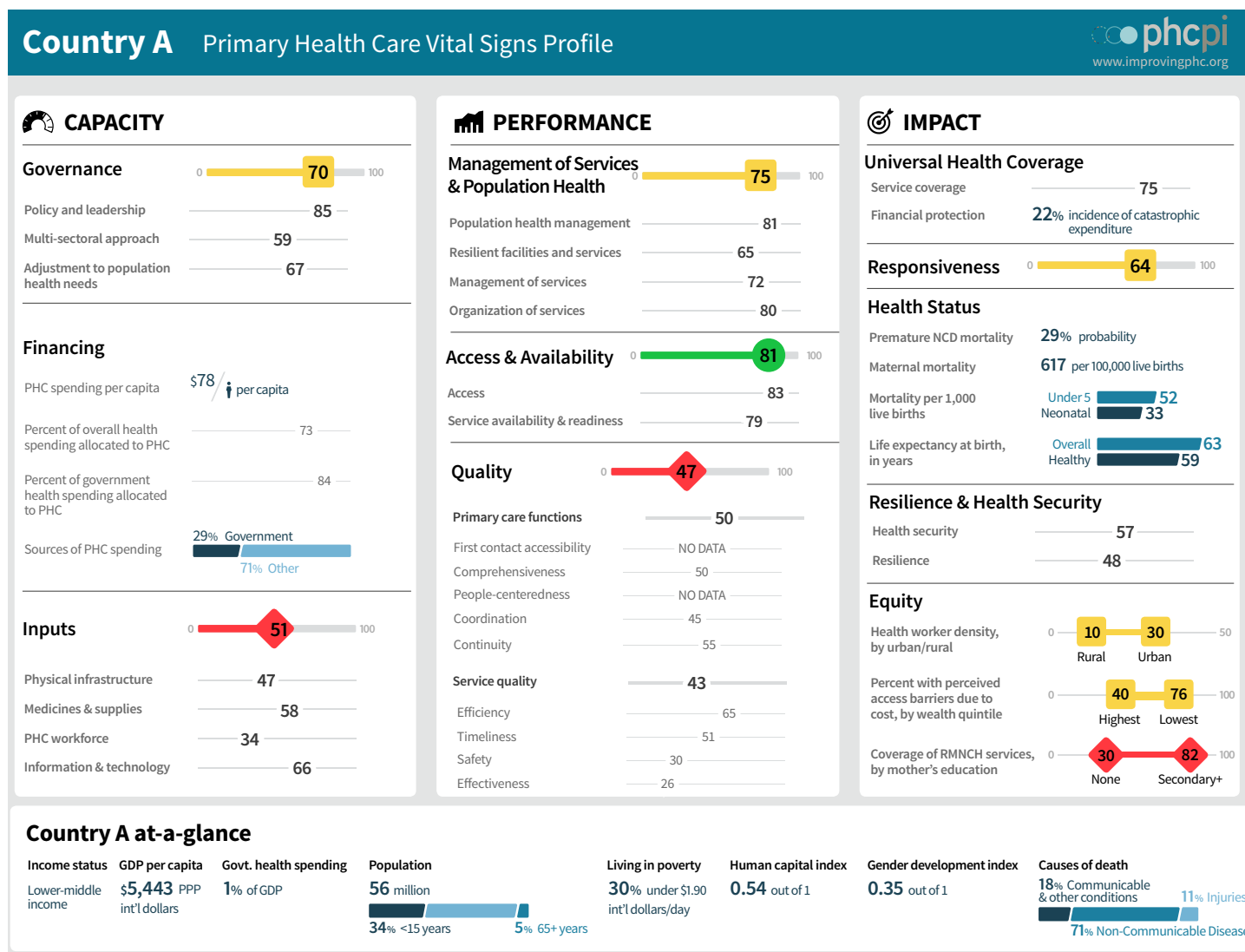


Figure 7. Example of a country profile to monitor PHC performance improvement: PHCPI vital signs profile template



Source: PHCPI vital signs profile. The PHCPI vital signs profile is designed to support the PHC measurement framework and indicators and is currently under development to be published (22).

## 5. Implementing PHC monitoring at country and subnational levels



This guidance provides a framework and menu of indicators that countries can use to develop their own country-level and country-led PHC monitoring agenda. A stepwise process for country-tailored and adapted implementation of the framework and indicators in a way that enables countries to take corrective actions, allocate resources, and inform policy dialogues is outlined below.

### ► **Step 1:** Align PHC monitoring within existing national health sector plans, strategies and review processes

In most countries, the national health sector strategy or policy provides the basis for all country monitoring and evaluation and related planning, and review processes provide a key entry point for policy dialogues that can influence priority setting and resource allocation. As such, countries are encouraged to embed and align PHC monitoring and evaluation within existing national processes for health sector planning, monitoring and review of national health sector plans, related health sector strategies and accountability mechanisms. Since the goal of PHC is to accelerate progress towards the achievement of UHC and the SDGs, it is essential to align PHC monitoring within processes specific to UHC and the SDGs.

Documented attributes of sound monitoring and evaluation and review of national health strategies should be applied in these efforts (7, 36).

## ► **Step 2:** Tailor selection of indicators based on country policies, priorities, maturity of health system and gaps

The primary use of the framework and menu of indicators is for countries to track their own progress on PHC. Countries can use the framework to tailor and prioritize the indicators most relevant and useful based on national context and health needs in an approach that is suited to the maturity of their health systems and health information systems. Selection, adaptation and prioritization of indicators should be based on priorities, gaps, and risks within a country, with consideration of the potential policies, reforms and potential actions around the PHC strategic and operational levers that may be required.

## ► **Step 3:** Set and monitor baseline values and country targets for PHC

Monitoring PHC capacities and performance will require tracking progress against agreed targets. This guidance does not set global or national targets, as country context and population health needs vary to such an extent that it is difficult to set meaningful targets. However, countries are encouraged to establish baseline values and set their own targets against that baseline and their intended trajectory, and update those targets on a regular basis based on the progress made. Countries can consider conducting a situation analysis to inform baseline values. As noted above, the situation analysis should draw from both qualitative and quantitative data (from existing data sources as well as rapid assessments as needed) on the epidemiological, political, socioeconomic and organizational context in the country, while paying special attention to equity issues. Country targets should be agreed by key stakeholders within and across the health sector based on this baseline, country capacities, priorities, resources, and the methods used for measurement (including feasibility and frequency). The situation and trends towards indicator targets should then be reported at country level on a regular basis through national health sector planning and review processes. Baseline values and targets should be updated regularly according to progress made.

## ► **Step 4:** Identify data sources and address major data gaps through innovative methods and tools

Effective assessment and monitoring of PHC performance will require accurate and up-to-date data from a broad range of functioning country data systems. As such, countries are encouraged to sustainably build on and strengthen existing data monitoring systems while investing in innovative methods and tools to collect data for new indicators through Qualitative assessments.

As seen in Figure 8, the majority of PHC menu indicators draw from qualitative and facility-level data, namely qualitative policy surveys, facility surveys, and routine health information systems (RHIS) or health management information systems (HMIS). At the policy level, countries should plan to undertake national and subnational **qualitative key informant surveys** to robustly assess PHC capacities, including in the areas of PHC legislation, mechanisms for engagement with communities, multisectoral coordination and action, regulatory systems and models of care.

A combination of facility-level data sources is also critical to provide necessary local- and national-level data on PHC performance. Regular systems of **facility surveys**, such as Qualitative assessments with facility managers, should be implemented to provide objective measures for evaluating facility and service capacities and readiness and systems for improving quality and resilience.

**RHIS** also provide a substantial source of continuous (usually monthly) information relevant to PHC performance at district and facility levels, including on service utilization, service delivery, safety and efficiency, service coverage, and morbidity and mortality. In efforts to bolster existing routine data systems, wherever possible countries should invest in strengthening **electronic health records** to

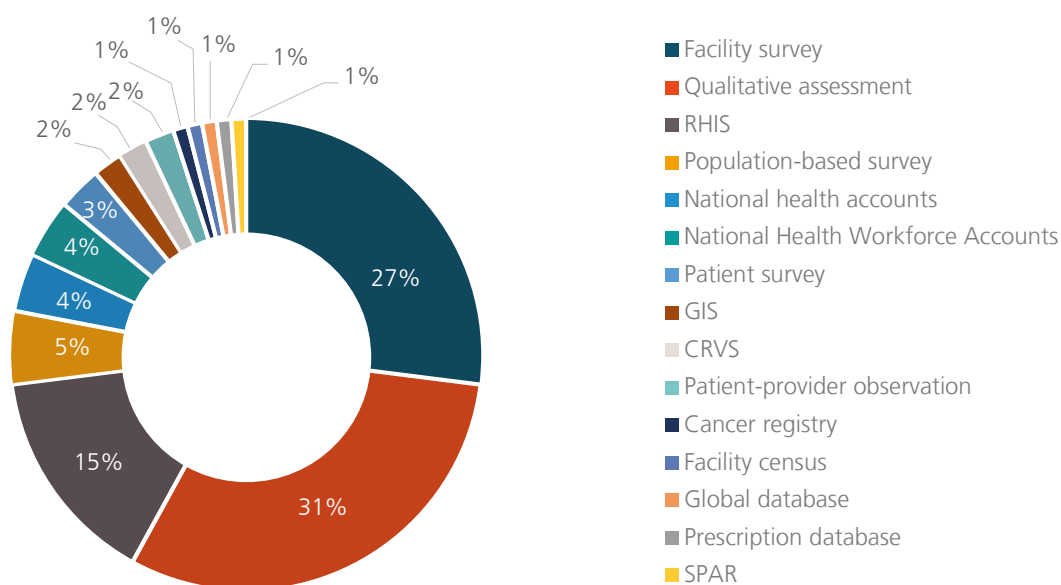
support continuous patient monitoring systems. These are critical not only to ensure quality care and improved outcomes for individual patients, but also to improve continuity of care as people move across different health care settings and experience different health care needs.

Countries are also encouraged to invest in **patient- and community-based data systems** to support the comprehensive assessment of PHC from the demand side. Regular patient surveys or interviews provide essential insight into the quality, safety and experience of care, while community assessments can help to signal emerging community health needs, barriers to care, or changes in health-seeking behaviour to trigger health system response.

Data sources that may need specific investment to support comprehensive PHC assessment include population-based surveys, national health accounts and national health workforce accounts, and national registries.

To support countries in these efforts, WHO is developing a series of tools to fill critical data gaps and support the comprehensive assessment of PHC, including policy-level Qualitative assessments as well as a new integrated approach to facility assessments based on the new UHC compendium of services (47). This in turn will support the assessment of different types of care settings (for example, primary care, hospitals, and emergency and critical care settings) and will include modules on key aspects of PHC that have previously been undermeasured, such as PHC-oriented models of care and quality of care. WHO is also developing new user experience tools to assess community health needs, experience and quality of care, and demand for care. Countries are also encouraged to reference the WHO SCORE technical package for guidance and tools on strengthening health information systems (67).

**Figure 8. Key data sources for PHC menu of indicators**



Note: Some indicators may be available through more than one data source.

## ► **Step 5:** Strengthen capacities at national and subnational levels in data analysis, communication and dissemination of results

Access to reliable data for key indicators is necessary, but insufficient for improving performance; the data must be analysed, transformed into knowledge of performance gaps and bottlenecks, and communicated for use to support the identification and implementation of course-corrective actions.

Strengthening country capacities in data quality, analysis and use for performance improvement must go hand in hand with investments in improving data collection tools and methods noted in step 4. This implies investment in health analysts, ministries of health, public health institutions and national statistical offices to ascertain the quality and undertake triangulation of data from various data sources (including from HMIS and surveys at national, subnational, facility and community levels), across various service delivery platforms, and drawing from various sectors, including the private sector. As completeness, timeliness and other data quality issues can often hamper the utility of HMIS and facility data, capacity-strengthening activities should ensure that these areas are targeted. Major developments in standardized tools for data quality improvement and analysis, combined with the spread of web-based information systems in many countries, is helping to address this problem (68).

Communication and dissemination of data for decision-making and action will also require country capacity strengthening. Health ministry officials, district and facility managers, health professional associations, individual providers (public and private), legislative bodies, communities, patients and the media all demand accessible, high-quality health information for multiple purposes. There are technical dimensions to this challenge, such as the need for interoperable systems and the need for data to be made available in a timely manner in easy-to-digest formats.

The WHO SCORE technical package also includes guidance and tools for analysis, dissemination and use (67).

## ► **Step 6:** Conduct regular process of policy dialogues to guide actions, interventions and investments for PHC performance improvement and management

Data without linkages to improvement are impotent. The PHC measurement framework and menu of indicators have thus been developed to provide a necessary bridge between measurement and improvement in PHC for improved PHC and UHC performance. Indicators that track overall PHC progress can feed into improvement interventions at the national, subnational, facility and community levels.

Translating data collection, analysis, and use into action for improvement, however, requires behavioural change (for instance through training, incentives and institutional mechanisms) in addition to the technical solutions noted above. Fostering an environment that supports the systematic use of data to drive performance improvement is not only a key aspect of the *Operational framework for PHC* lever on systems for improving the quality of care, but also a major element in building a culture of regular data review and use to inform decision-making while promoting transparency.

One way to institutionalize and strengthen data use and informed action is to create a regularly occurring process by which key country stakeholders come together to examine data, correct current courses of action, and guide national and subnational policy dialogues on health and PHC reforms while fostering mutual accountability. Many countries hold annual reviews of progress, occasionally in the form of a widely consultative national health assembly, which can provide an important venue for these convenings. Midterm reviews of national strategies are another important moment to synthesize and analyse data and reflect on performance. Reviews should be (a) informed by a comprehensive analytical report that provides in-depth synthesis and analysis of all relevant data; and (b) systematically linked to actions around the 14 PHC strategic and operational levers.



## 6. From country monitoring to regional and global reporting



In response to World Health Assembly resolution WHA72.2 and to track global progress made by WHO Member States in strengthening PHC towards UHC (3), a list of recommended measures for regional- and global-level reporting is presented in Table 15. It comprises a limited subset of indicators that have been prioritized for regional and global monitoring.

**Table 15. Proposed global-level reporting indicators**

### Indicator

- Health in All Policies with multisectoral coordination
- Existence of national health policy oriented to PHC and UHC
- Existence of policy, strategy or plan for improvement of quality and safety
- Coordination mechanisms with multistakeholder participation and community engagement
- Per capita total health expenditure (and PHC specific)\*
- Government PHC spending as percentage of government health expenditure \*
- Health facility density and distribution (primary care, public/private mix)\*
- Availability of basic water, sanitation and hygiene (WASH) amenities\*
- Health worker density and distribution (by occupation, public or private) [SDG 3.c.1]\*
- Availability of essential medicines (percentage of primary care facilities and other types) [SDG 3.b.3] \*
- Service package meeting criteria
- Outpatient visits (primary care)
- Admissions for ambulatory care sensitive conditions\*

\*Indicators are currently already reported through ongoing global monitoring efforts.

As noted previously, this guidance aims to minimize the burden of country-to-global reporting by maximizing the linkages with established global monitoring processes, including for UHC and the SDGs. As such, several indicators selected for global reporting are already reported to some degree through existing global monitoring efforts for UHC and the SDGs, the WHO Thirteenth General Programme of Work monitoring indicators (69-73), and other regional and global monitoring efforts (i.e. OECD Health Care Quality Indicators (20), WHO's Global Health Expenditure Database (74), etc). These have been marked with \* in Table 15. Other indicators are considered to be new for global PHC reporting. For these indicators new to global reporting, every effort will be taken to mainstream reporting on these indicators within existing data collection exercises, aligned to the data governance principles of WHO.

The links between the PHC monitoring framework and universal coverage of essential health services is especially important. According to the SDG monitoring framework, countries are expected to report on progress towards UHC as specified in targets 3.8.1 on essential health service coverage and 3.8.2 on financial protection (25). The proposed PHC monitoring framework is fully linked to the UHC service coverage index for target 3.8.1, which is focused on the coverage of essential primary care services, outputs and outcomes. The PHC monitoring framework includes the first three of the four components of the UHC service coverage index, with coverage indicators for reproductive, maternal, newborn, child and adolescent health and nutrition, control of communicable diseases, and control of noncommunicable diseases. The fourth component of the UHC service coverage index, service capacity and access, is also addressed in the PHC monitoring framework through input and output indicators (75).

In this way, the UHC service coverage index is a useful summary measure of the overall functioning of health services, but it is the tracking of the PHC indicators presented in this framework that can help identify progress and challenges in the areas of investment, supplies, demand for and quality of care at national and subnational levels. To aid in this analysis, Table 15 proposes PHC indicators that can be tracked globally to complement the UHC service coverage index.

WHO, together with multilateral health agencies and other partners, will annually review and update data on PHC performance. The results will be available publicly through WHO global reports and databases, as well as through the publication of the first PHC global report that is currently scheduled for 2022. An interim report on PHC progress and performance based on currently available data will be published in the next UHC global monitoring report. WHO through its regional and country office network will work with Member States to support the collection, validation and analysis of data in support of country monitoring objectives.

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## Annex 1. Menu of indicators for country selection for PHC monitoring, by PHC component

Countries are encouraged to select a small set of indicators from the menu based on an analysis of country context, gaps, and priorities in national policies and reforms, and in consideration of the strength and maturity of the health system and health information system.

### Legend

Indicator tier		PHC component		
<b>Tier 1 (n=39)</b>	Feasible to collect, monitor and track in most contexts	<b>IHS</b>	Integrated health services, with primary care and essential public health functions	
<b>Tier 2 (n=48)</b>	Considered desirable, but not necessarily feasible for all contexts, and in some cases requiring further development and testing	<b>MPA</b>	Multisectoral policy and action	
<b>Global (n=12)</b>	Small subset of Tier 1 indicators highly relevant for global reporting and monitoring	<b>EPC</b>	Empowered people and communities	

#	Indicators	Indicator tier	IHS	MPA	EPC
<b>Governance</b>					
<b>Political commitment and leadership</b>					
1	Health in All Policies with multisectoral coordination	Tier 1 + Global	✓	✓	✓
2	Existence of right to health legislation	Tier 2	✓	✓	✓
<b>Governance and policy frameworks</b>					
3	Existence of national health policy oriented to PHC and UHC	Tier 1 + Global	✓	✓	✓
4	Existence of policy, strategy or plan for improvement of quality and safety	Tier 1 + Global	✓	✓	✓
5	Existence of health emergency and disaster risk management strategies	Tier 1	✓	✓	✓
6	Institutional capacity to meet essential public health functions and operations	Tier 2	✓	✓	✓
<b>Engagement with communities and other multisectoral stakeholders</b>					
7	Coordination mechanisms with multistakeholder participation and community engagement	Tier 1 + Global	✓	✓	✓
8	Existence of national, subnational and local strategies for community participation	Tier 2	✓	✓	✓
<b>Engagement with private sector providers</b>					
9	Evidence of effective stewardship of mixed health systems	Tier 2	✓	✓	✓
<b>Adjustment to population needs</b>					
<b>Monitoring and evaluation</b>					
10	Priority setting is informed by data and evidence	Tier 1	✓	✓	✓
11	Existence of an M&E framework for national health plan meeting criteria	Tier 1	✓	✓	✓
<b>PHC-oriented research</b>					
12	Total net official development assistance to medical research and basic health sector	Tier 1	✓	✓	✓
13	Percentage of public research funding for primary care research	Tier 2	✓	✓	✓
<b>Financing</b>					
<b>Funding and allocation of resources</b>					
14	Current expenditure on health (total and PHC specific) as a percentage of gross domestic product (GDP)	Tier 1	✓	✓	✓
15	Per capita total health expenditure (and PHC specific)	Tier 1 + Global	✓	✓	✓
16	Government PHC spending as percentage of government health expenditure	Tier 1 + Global	✓	✓	✓
17	Sources of expenditure on health (and PHC specific)	Tier 2	✓	✓	✓
18	Contingency funds available for emergencies	Tier 2	✓	✓	✓
<b>Purchasing and payment systems</b>					
19	Services included in health benefits package (including primary care)	Tier 1	✓	✓	✓
20	Purchasing and provider payment methods are in place (including primary care)	Tier 2	✓	✓	✓
21	Health financing follows established guidelines	Tier 2	✓	✓	✓
<b>Physical infrastructure</b>					
22	Health facility density/distribution (including primary care)	Tier 1 + Global	✓	✓	✓
23	Availability of basic water, sanitation and hygiene (WASH) amenities	Tier 1 + Global	✓	✓	✓
24	Availability of power	Tier 1	✓	✓	✓
25	Availability of communications	Tier 1	✓	✓	✓
26	Access to emergency transport for interfacility transfer	Tier 2	✓	✓	✓
<b>Health workforce</b>					
27	Health worker density and distribution [SDG 3.c.1]	Tier 1 + Global	✓	✓	✓
28	Accreditation mechanisms for education and training institutions	Tier 2	✓	✓	✓
29	National systems for continuing professional development	Tier 2	✓	✓	✓
<b>Medicines and other health products</b>					
30	Regulatory mechanisms for medicines	Tier 2	✓	✓	✓
31	Availability of essential medicines [SDG 3.b.3]	Tier 1 + Global	✓	✓	✓
32	Availability of essential in vitro diagnostics	Tier 2	✓	✓	✓
33	Availability of priority medical equipment and other medical devices	Tier 2	✓	✓	✓
<b>Health information</b>					
<b>Information systems</b>					
34	Completeness of reporting by facilities	Tier 2	✓	✓	✓
35	Percentage of facilities using comprehensive patient records	Tier 2	✓	✓	✓
36	Regular system of facility and patient surveys	Tier 2	✓	✓	✓
37	Functional national human resource information system and national health workforce accounts	Tier 1	✓	✓	✓
38	Completeness of birth registration	Tier 1	✓	✓	✓
39	Completeness of death registration	Tier 1	✓	✓	✓
40	Regular system of population-based health surveys	Tier 2	✓	✓	✓
<b>Surveillance</b>					
41	Existence of effective surveillance system	Tier 1	✓	✓	✓



#	Indicators	Indicator tier	IHS	MPA	EPC
<b>Digital technologies for health</b>					
42	National e-health strategy	Tier 2	✓	✓	
43	Telemedicine access	Tier 2	✓	✓	
44	Percentage of facilities using electronic health records	Tier 1	✓	✓	
<b>Models of care</b>					
<b>Selection and planning of services</b>					
45	Service package meeting criteria	Tier 1 + Global	✓		
46	Roles and functions of service delivery platforms and settings defined	Tier 1	✓		
<b>Service design</b>					
47	Existence of an empanelment system	Tier 2	✓		
48	System to promote first contact accessibility	Tier 1	✓		
49	Protocols for patient referral, counter-referral and emergency transfer	Tier 2	✓		
50	Existence of care pathways for tracer conditions	Tier 2	✓		
<b>Organization and facility management</b>					
51	Professionalization of management	Tier 2	✓		
52	Management capability and leadership	Tier 2	✓		
53	Multidisciplinary team-based service delivery	Tier 2	✓		✓
54	Existence of supportive supervision system	Tier 1	✓		
55	Existence of facility budgets and expenditures meeting criteria	Tier 2	✓		
<b>Community linkages and engagement</b>					
56	Collaboration between facility-based and community-based service providers	Tier 2	✓		✓
57	Community engagement in service planning and organization	Tier 2	✓		✓
58	Proactive population outreach	Tier 1	✓		✓
59	Services for self-care and health literacy in primary care	Tier 2	✓		✓
<b>Systems for improving quality of care</b>					
60	Percentage of facilities with systems to support quality improvement	Tier 1	✓		
<b>Resilient health facilities and services</b>					
61	Percentage of facilities meeting criteria for resilient health facilities and services	Tier 2	✓		
<b>Access and availability</b>					
<b>Accessibility, affordability, acceptability</b>					
62	Geographical access to services	Tier 2	✓		
63	Perceived barriers to access (geographical, financial, sociocultural)	Tier 1	✓		
64	Access to emergency surgery	Tier 2	✓		
65	Existence of a system of post-crash care	Tier 2	✓		
<b>Service availability and readiness</b>					
66	Percentage of facilities offering services according to national defined service package	Tier 1	✓		
67	Provider availability (absence rate)	Tier 2	✓		
68	Percentage of facilities meeting minimum standards to deliver tracer services	Tier 1	✓		
69	Percentage of facilities compliant with infection prevention and control (IPC) measures	Tier 1	✓		
<b>Utilization of services</b>					
70	Outpatient visits	Tier 1 + Global	✓		
71	Emergency unit visits	Tier 2	✓		
72	Hospital discharges**	Tier 1	✓		
73	Leading diagnoses (primary care/outpatient visits, inpatient diagnoses at discharge**)	Tier 1	✓		
<b>Quality care</b>					
<b>Core primary care functions</b> (first-contact accessibility, continuity, comprehensiveness, coordination, people-centredness)					
74	Patient-reported experiences	Tier 1	✓		✓
75	People's perceptions of health system and services	Tier 2	✓		✓
<b>Effectiveness</b>					
76	Diagnostic accuracy (provider knowledge)	Tier 2	✓		
77	Adherence to clinical standards for tracer conditions	Tier 2	✓		
78	30-day hospital case fatality rate (for acute myocardial infarction or stroke)**	Tier 2	✓		
79	Avoidable complications (lower limb amputation in diabetes)	Tier 2	✓		
80	Hospital readmission rate for tracer conditions**	Tier 2	✓		
81	Admissions for ambulatory care sensitive conditions	Tier 1 + Global	✓		
<b>Safety</b>					
82	Prescribing practices for antibiotics	Tier 1	✓		
83	Proportion of people 65 years and over prescribed antipsychotics	Tier 2	✓		
<b>Efficiency</b>					
84	Provider caseload	Tier 2	✓		
85	Bed occupancy**	Tier 2	✓		
<b>Timely access</b>					
86	Cancer stage at diagnosis (by cancer)	Tier 2	✓		
87	Waiting time to elective surgery**	Tier 2	✓		

\*\* Hospital-oriented indicators considered important for broader PHC-oriented health system monitoring and relevant in terms of inter-relations with primary care.

# Annex 2. Example of how the PHC measurement framework can be applied to monitor specific conditions or disease areas – an example for noncommunicable diseases

